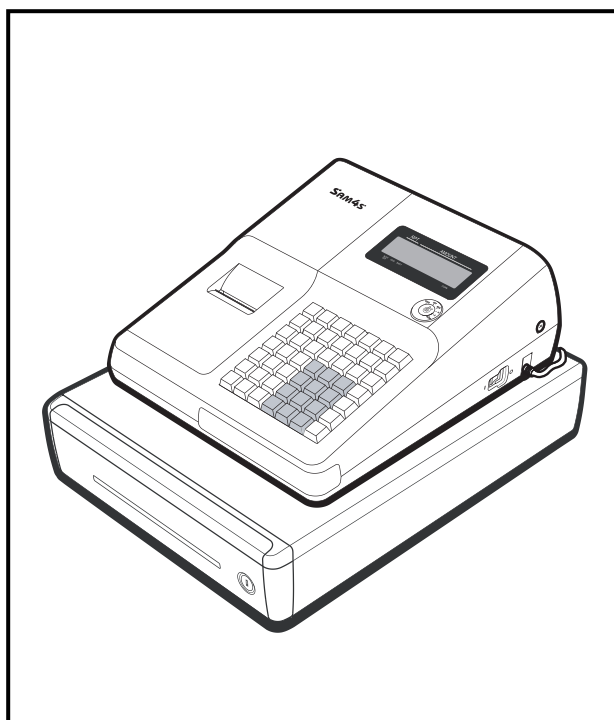


SAM4S

ELECTRONIC CASH REGISTER ER-260 SERIES

SERVICE Manual

ELECTRONIC CASH REGISTER



C O N T E N T S

1. Precaution Statements
2. Product Specifications
3. Installation and Operation
4. Disassembly and Assembly
5. Troubleshooting
6. Exploded Views and Parts List
7. PCB Layout and Parts List
8. Block diagram
9. Wiring Diagram
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
About this Manual


This service manual describes how to perform hardware service maintenance for the SAM4S ER-260 Series Electronic Cash Register.

Notes

Notes may appear anywhere in the manual. They describe additional information about the item.

Precaution symbols

. Indicates a Safety Precaution that applies to this part component.

. Indicates the part or component is an electro-statically sensitive device. Use caution when handling these parts.

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SAM4S ER-260 SERIES

Service Manual Second edition.

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V1.1

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Overview of this ECR

This ECR is a microprocessor-based system, using a 8 bits microprocessor.

This service manual provides the technical information for many individual component systems, circuits and gives an analysis of the operations performed by the circuits. If you need more technical information, please contact our service branch or R&D center. Schematics and specifications provide the needed information for the accurate troubleshooting.

All information in this manual is subject to change without prior notice. Therefore, you must check the correspondence of your manual with your machine. No part of this manual may be copied or reproduced in any form or by any means, without the prior written consent of Shin Heung Precision.

Note: Before using this Electronic Cash Register (ECR) for the first time, leave it powered on in the REG mode for at least 24 hours. This allows the MS Lithium battery, which maintains the memory of the ECR while the power is off, to charge completely.



“Proper disposed of batteries is required. Refer to your local codes for disposed requirements.”

1 Precaution Statements

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

1-1 Safety Precautions

1. Be sure that all built-in protective devices are replaced. Restore any missing protective shields.
2. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including nonmetallic control knobs and compartment covers.
3. Make sure there are no cabinet openings through which people - particularly children - might insert fingers and contact dangerous voltages.
Such openings include excessively wide cabinet ventilation slots and improperly fitted covers and drawers.
4. Design Alteration Warning:
Never alter or add to the mechanical or electrical design of the SECR. Unauthorized alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.
5. Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of damage or over- heating, and correct any potential hazards.
6. Observe the original lead dress, especially near the following areas: sharp edges, and especially the AC and high voltage supplies.
Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.
7. Product Safety Notice:
Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original - even if the replacement is rated for higher voltage, wattage, etc.

Components that are critical for safety are indicated in the circuit diagram by shading, () or (). Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.

Dispose used batteries according to the manufacturer's instructions.

ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.

Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.

Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

1-2 Servicing Precautions

WARNING: First read the-Safety Precautions-section of this manual. If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precautions.

WARNING: An electrolytic capacitor installed with the wrong polarity might explode.

1. Servicing precautions are printed on the cabinet. Follow them.
2. Always unplug the units AC power cord from the AC power source before attempting to:
 - (a) Remove or reinstall any component or assembly
 - (b) Disconnect an electrical plug or connector
 - (c) Connect a test component in parallel with an electrolytic capacitor
3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.
5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels and input terminals).
6. Insulation Checking Procedure:

Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of AC plug.

The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 mega ohm.
7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.
8. Always connect an instrument's ground lead to the instrument chassis ground before connecting the positive lead ;
Always remove the instrument's ground lead last.

1-3 Precautions for Electrostatic Sensitive Devices (ESDs)

1. Some semiconductor (solid state) devices are easily damaged by static electricity. Such components are called Electrostatic Sensitive Devices (ESDs); examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.
2. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. (Be sure to remove it prior to applying power - this is an electric shock precaution.)
3. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.
4. Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDs.
5. Use only a grounded-tip soldering iron when soldering or unsoldering ESDs.
6. Use only an anti-static solder removal device. Many solder removal devices are not rated as anti-static; these can accumulate sufficient electrical charge to damage ESDs.
7. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
8. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
9. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together or lifting a foot from a carpeted floor can generate enough static electricity to damage an ESD.

2 Product Specifications

Specifications are correct at the time of printing. Product specifications are subject to change without notice. See below for product specifications.

2-1 Specifications

Item	Description	Remark
Processor	WINBOND CPU W78C438 (8-Bit)	
Memory	<ul style="list-style-type: none"> RAM <ul style="list-style-type: none"> SRAM (K6T1008C2E) : 1MBITs (Default) SRAM (K6T4008C2E) : 4MBITs (Option) ROM <ul style="list-style-type: none"> EPROM(27C2001) : 2MBITs (Default) FISCAL ROM <ul style="list-style-type: none"> EPROM(27C1001) : 1MBITs (Default) EPROM(27C2001) : 2MBITs (Option) 	
Battery	<ul style="list-style-type: none"> Type : MS Lithium, 3.0V 11mAh Part Name : MS920S Charging Time : 24 Hours Life : 3 Years 	
Data Storage	<ul style="list-style-type: none"> 60 Days 	When battery is Full charged
Interface Serial (RS-232C)	<ul style="list-style-type: none"> Flow Control : <ul style="list-style-type: none"> ① DTR / DSR : H/W Flow Control Baud Rate : 9600 Bps Connector : DB9P Female (I/F PBA) Voltage Supply : VCC(+5V/150mA) supplies at 9Pin of Connector. 	
Printer	<ul style="list-style-type: none"> Model : LTP8235 (SII) Print Speed : 30mm/Sec, 8Line/Sec Type : Thermal Dot Line Printing Resolution : 150 dpi (6 Dot) Paper End Sensor (Photo Sensor) 	Detail Spec refer to Next Page
Display	<ul style="list-style-type: none"> Operator Display : 10 Digits VFD or LCD(16 * 2Line Character Type) Customer Display : 10 Digits VFD (Option) 	
Keyboard	<ul style="list-style-type: none"> 49-Key (Raised Type): ER-260 49-Key (Flat Type) : ER-265 	
Drawer	3B4C / 4B4C	Small Drawer
	5B5C / 4B8C / 7B8C	Middle Drawer
Power Consumption	<ul style="list-style-type: none"> Regularity : Approx. 20W 	
Power Requirement	<ul style="list-style-type: none"> AC 120V 60Hz, 230V 50Hz 	
Environment Condition	<ul style="list-style-type: none"> Temperature : 0℃ ~ 45℃ humidity : 30% ~ 80% RH 	
Dimensions(mm)	<ul style="list-style-type: none"> 325(W) X 420(D) X 226(H) 	With Small Drawer
Weight	<ul style="list-style-type: none"> 7.4 Kg (Set Only), 8.6Kg (with Packing) 	With Small Drawer

Table2-1 General Specifications

2-2 Dimensions

2-2-1 Appearance Dimensions (mm)

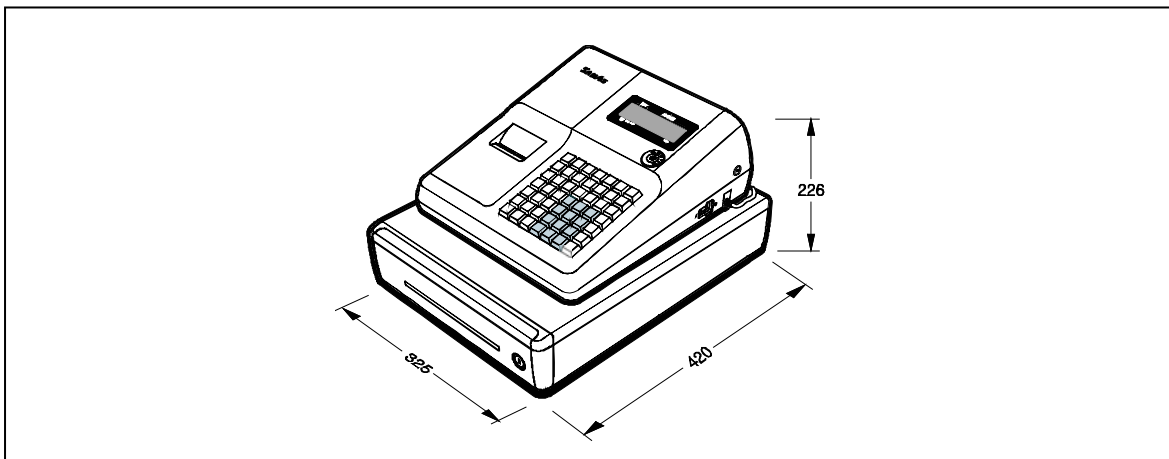


Figure2-1 Dimensions

2-2-2 Location Feature

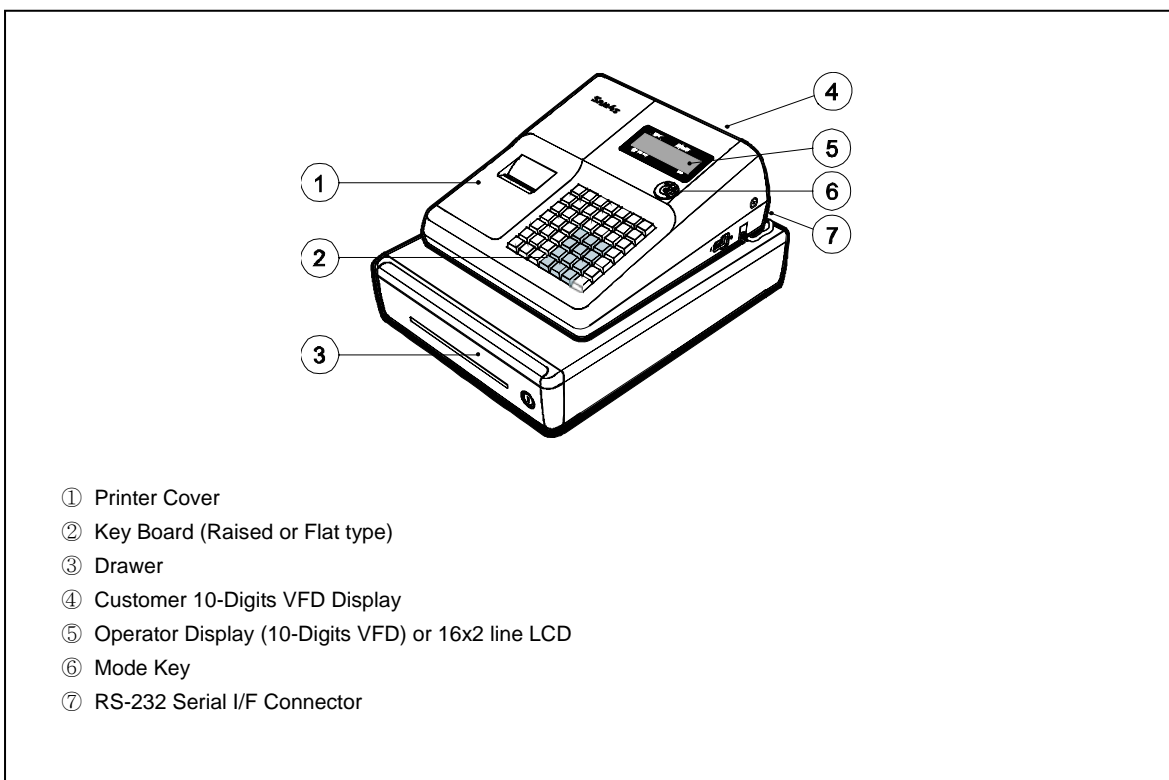


Figure2-2 Location Feature

2-3 Printer Specification

2-3-1 Printer Specification

Item		Description	Remark
Model		• LTP8235(SII)	
Print Method		• Thermal Dot Line Printing	
Printing Format	Total Number of Dots	• 288 Dots	
	Dot Pitch	• Vertical : 0.169 mm • Horizontal : 0.169 mm	
Printing Speed		• 30mm/Sec, 8Line/Sec	
Printing Direction		• Unidirectional friction feed	
Paper Feeding	Feeding Method	• Friction Feed	
	Minimum Feed Pitch	• 0.169 mm	
	Feeding Speed	• 30 mm/Sec (At 6V of Motor Voltage)	
Power Supply Volt	Power Voltage	• 6.0V (Recommend)	Head/Motor
	Circuit Input Voltage	• 5V	Head Control/Sensor
Printer Head	Heat Element Density	• 6 Dots/mm (0.169 mm/Dot)	
	Total Head Elements	• 288 Dots/Dot Line	
	Available Printing Width	• 48 mm	
Line Feed Motor		• 4-Phase Bi-Polar Stepping Motor	
Sensor	Head Temperature	• Thermistor	
	Paper-End Sensor	• Reflecting Photo Sensor	
Reliability	Life	• 50km / 5×10^7 pulse	
Dimension (mm)		• 38.0 (W) × 72.0 (D) × 15.6 (H)	
Weight		• Approx. 50 g	

Table2-2 Thermal Printer Specification

2. Product Specifications

2-3 Thermal Printer Specifications

2-3-2 Paper Specification

Item	Description	Remark
Paper Type	• Single-ply Thermal Paper Roll	
Paper Size	• 57.5 mm ± 0.5 mm (Width) × Ø 70 mm or less	

Table2-3 Paper Specifications

2-3-3 Character Specification

Item	Description	Remark
Character Structure	• 8(W) × 17(H) Font (Including a horizontal)	
Character Size	• 1.33 mm(W) × 2.83 mm(H)	
Column Pitch	• 1.5 mm	
Line Pitch	• 3.67 mm (Including 5-dot line spacing)	
Number of Column	• 32 (8 × 17 Dots/Character)	

Table2-4 Character Specification

2-4 Power Specification

Item	Description	Remark
Input Voltage & Current	• U.S.A : AC 120V, 60Hz (Min : 102V, Max : 138V) • Europe : AC 220V/240V, 50Hz (Min : 195.5V, Max : 264.5V)	Max & Min : ± 15%
Power Consumption	• Regularity : Approx. 20W	
Output Voltage	• AC 19V 2.3A (Wire Color : Blue-Blue) • AC 24V 0.15A (Wire Color : Red-Red)	Power Transformer Output

Table2-5 Power Specification

2-5 Interface Specification

2-5-1 RS-232C Serial Interface

2-5-1-1 Specification

Item	Description	Remark
Data Transmission	• Serial	
Synchronization	• Asynchronous	
Hand Shaking (Flow Control)	• H/W : DTR / DSR	
Signal Level	• Logic"1" (MARK) : -3V ~ -15V • Logic"0" (SPACE) : +3V ~ +15V	
Baud Rate	• 9600 bps	
Data Word Length	• 8 Bit	
Parity	• None	
Connector	• DB9P Female (I/F PBA Side)	
Voltage Supply	• VCC(+5V/150mA) is supplied at 9Pin of D-SUB Connector.	For Bar Code Reader or other devices

Table2-6 RS-232C Specification

2-5 Interface Specification

2-5-1-2 Cable Connection

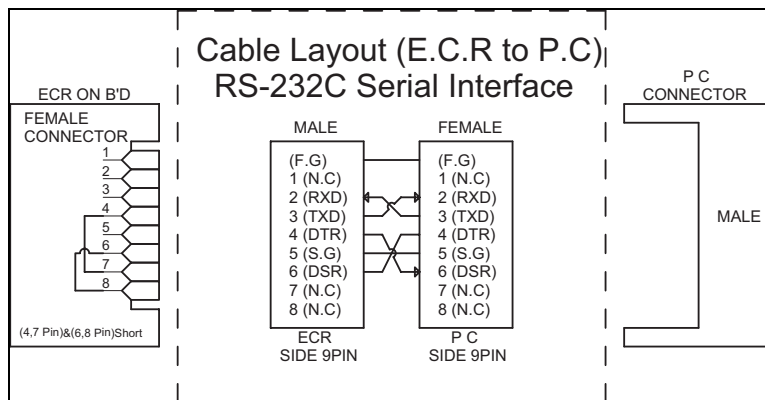


Figure2-3 RS232C Cable Connection (9Pin to 9Pin)

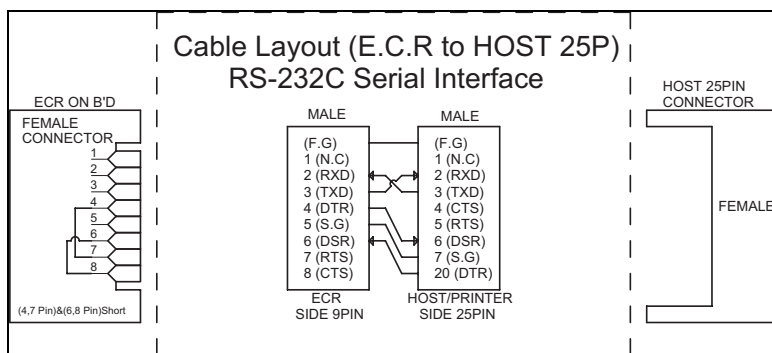


Figure2-4 RS232C Cable Connection (9Pin to 25Pin)

2-5 Interface Specification

2-5-1-3 Signal Description

Pin No.	Signal Name	Signal Direction	Function
BODY	Frame GND	-	Frame Ground
2	RXD	Input	Receive Data
3	TXD	Output	Transmit Data
4	DTR	Output	This Signal indicates whether the ECR(ER-260) is busy. (H/W flow control) ① MARK(Logic1) : The ECR is busy ② SPACE(Logic0) : The ECR is not busy ③ The host transmits a data to the ECR, after confirming this signal.
5	Signal GND	-	Signal Ground
6	DSR	Input	This signal indicates whether the host computer or receipt printer can receive data. (H/W flow control) ① MARK(Logic1) : The host can receive a data. ② SPACE(Logic0) : The host can not receive a data ③ The ECR transmits a data to the host or receipt printer, after confirming this signal.
9	VCC	Output	VCC(+5V/150mA) is supplied at 9Pin of D-SUB Connector.

Table2-7 RS-232C Signal Description

Caution: The VCC is supplied for the barcode or device power source. If the Total Power Consumption of the attached devices is exceeded the specification(150mA), the system stops the VCC of D-SUB Connector

2-5-1-4 H/W Flow Control Timing

When DTR/DSR flow control is select, before transmitting a data, the ECR checks whether the host is BUSY or not.

If the host is BUSY, ECR does not transmit a data to the host. If the host is not BUSY, ECR transmits a data to the Host.

The host is the same.

MEMO

3 Installation and Operation

3-1 System Configuration

3-1-1 Configuration

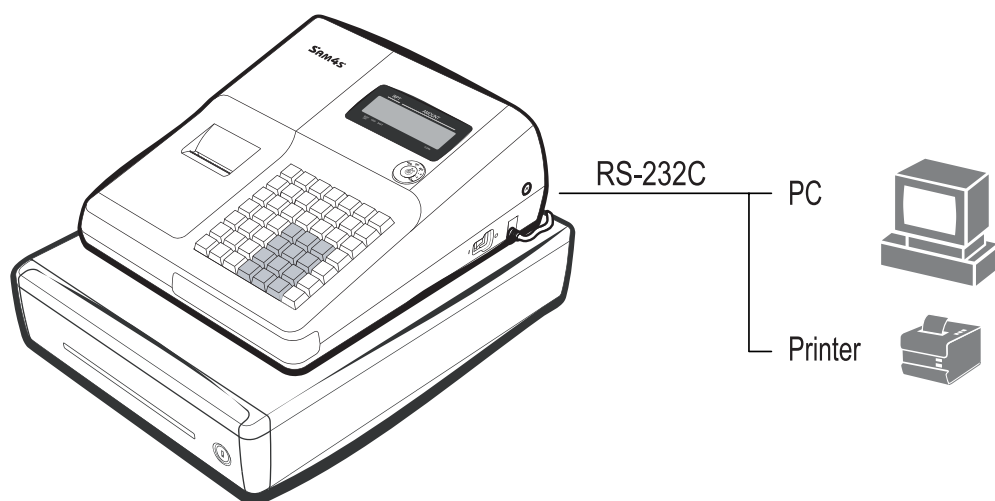


Figure 3-1. System Configuration

3-2 Installation

3-2-1 Paper Roll Installation

1. Remove the printer cover.(Fig 3-2 (A))
2. For proper feeding through the print head, cut or tear a straight even edge on the end of the paper roll.
(Be sure to remove any paper with glue residue.) Place the paper roll in the paper holder so that the paper will feed from the bottom of the roll.(Fig 3-2 (B))
3. Insert the end of the paper into the paper slot.(Fig 3-2 (C))
4. Close the paper lever. (ER-260 Series is possible to feed automatically when you rock the paper levers and insert paper.). (Fig 3-2 (D))
5. Replace the printer cover.(Fig 3-2 (E))

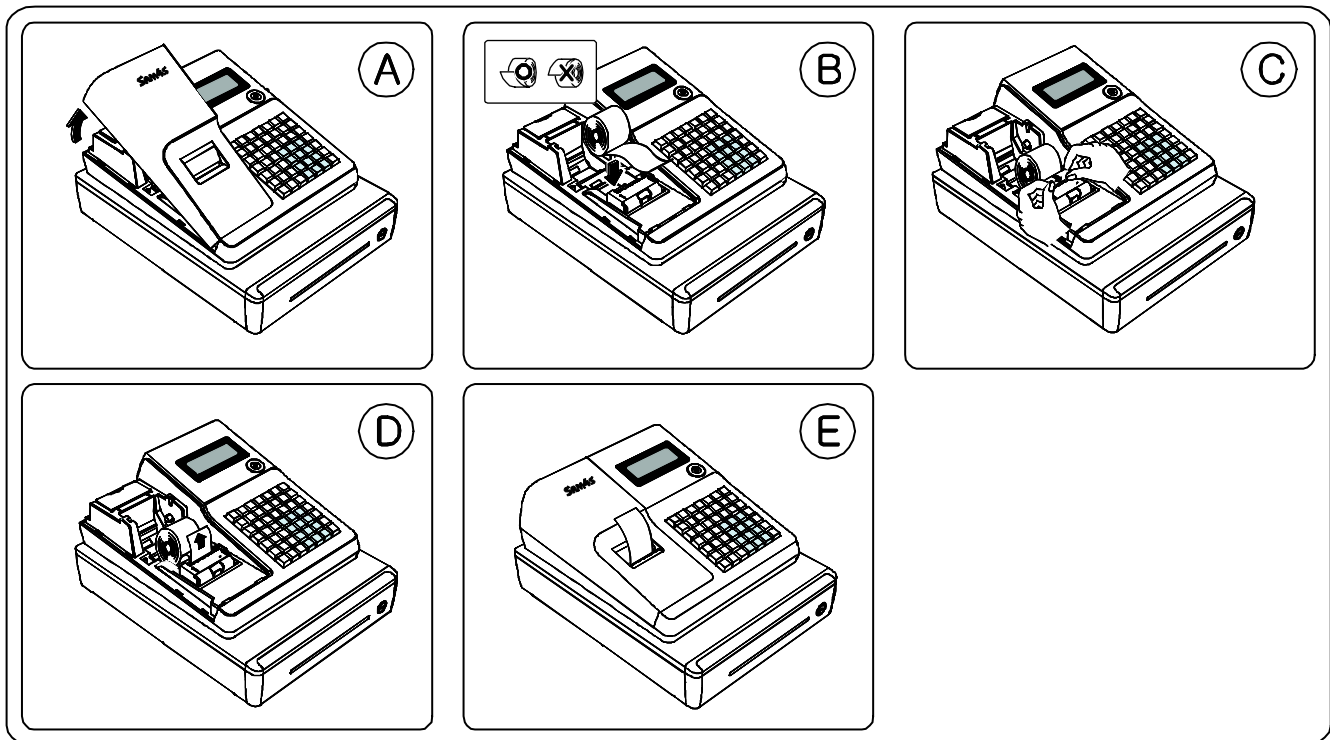


Figure 3-2. Paper Installation

3-2 Installation

3-2-2 Take-Up Spool Installation

※ If you wish to use the printer to print a sales journal, insert the paper into the paper take-up spool. Wind the paper two or three turns around the spool shaft and install the spool in the mount

1. If you use the ER-260 Series with 1-station, refer to below figure. (Fig 3-3 (F))
2. If you use the ER-260 Series with 2-stations, refer to below figure. (Fig 3-3 (G))

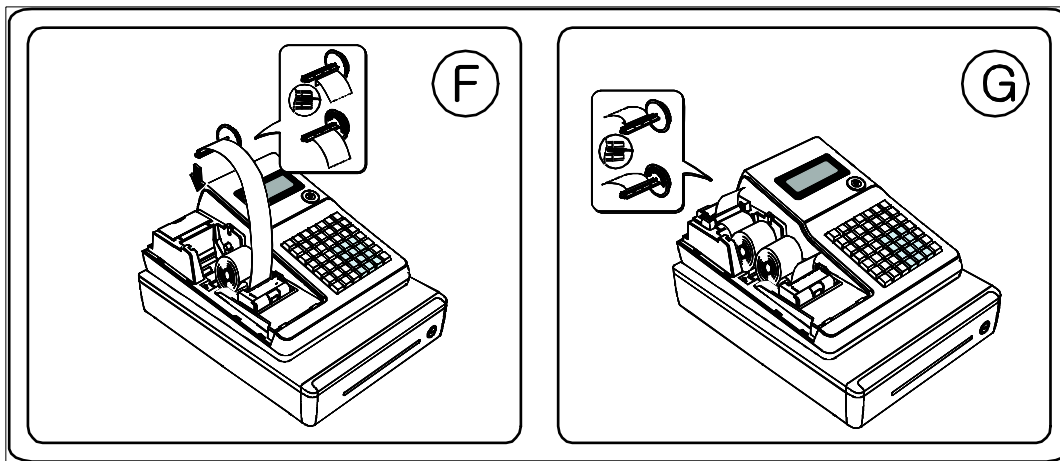


Figure 3-3. Spool Installation

3-2 Installation

3-2-3 RS-232C Serial Cable Installation

1. Open the I/F Door.
2. Connect the RS-232C serial cable to the RS-232C serial port on the rear side of ECR.
3. Secure the serial cable with screws.
4. Connector the other end of the RS-232C serial Cable to your host computer.

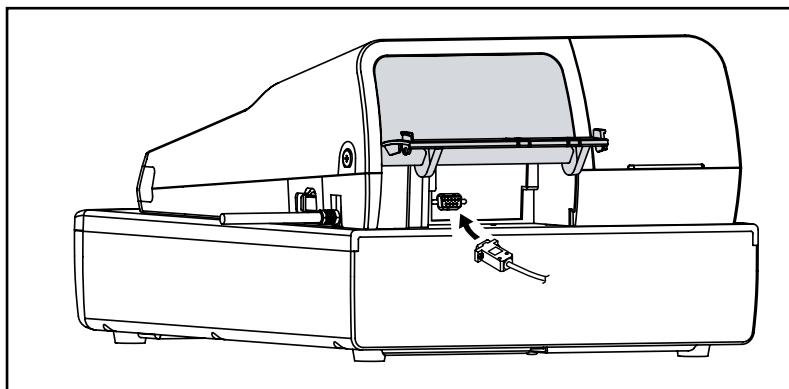


Figure 3-4. Cable Installation

3-2-4 Options

No.	Item	Description	Remark
1	Water Proof	Raised Keyboard (Option) Flat Keyboard (Default)	
2	Memory	SRAM 4MBITs (4MBITs * 1)	On Main PBA
3	Rear Display	VFD 10digit	Factory option
4	Pulley Winding	Spool motor & Pulley	Factory option

Table 3-1. Option

3-2-5 Supplies

No.	Item	Description	Remark
1	Paper Roll	1 EA	
2	Mode Key	VD, REG, X, Z, P, C : NON FISCAL REG, X, Z, P, C : FISCAL	
3	User Manual	1 EA	
4	Spool	1 EA	

Table 3-2. Supplies

3-3 Operation

Note: Before using this Electronic Cash Register (ECR) for the first time, leave it powered ON in the REG mode for a at least 24 hours. This allows the Ms-Lithium battery, which maintains the ECR's memory while the power is OFF, to fully charge.

3-3-1 Mode Switch

The position of the Mode Key determines the action of the ECR. The modes are as shown in Table 3-3

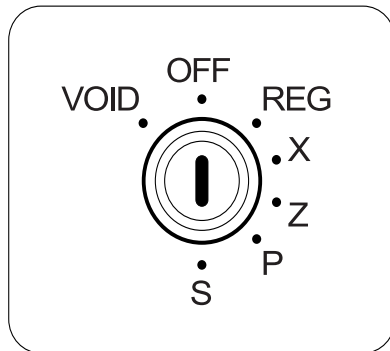


Figure3-5 Mode Switch

Mode	Key	Function
VOID	VD	Use to void (correct) items outside of a sale.
OFF	-	The Register is inoperable.
REG	REG	Use for normal registrations.
X	X	Use to read register reports and perform other manager functions.
Z	Z	Use to read register reports and reset totals to zero.
PGM	P	Use to program the register
S	C	Use for H/W tests and special setting.

Table3-3 Mode Switch Function

The mode switch can be used to access the following key lock positions.

Mode	Accessible Position	Remark
VOID	Void, Off, Register(REG), Manager(X)	
REG	Off, Register(REG)	
X	Off, Register(REG), Manager(X)	
Z	Off, Register(REG), Manager(X), Clear Totals(Z)	
PGM	Void, Off, Register(REG), Manager(X), Clear Totals(Z), Program(P)	
S	Void, Off, Register(REG), Manager(X), Clear Totals(Z), Program(P), Service Mode(S)	

Table3-4 Key Function

Note : The Key can be removed from the key lock in the OFF or REGISTER position.

3-3 Operation

3-3-2 Key Board Matrix

1) 1-station model

PAPER FEED	ADD CHECK	TAX	#/NS	CLERK	RA	PO
-	-%	+%	C/CONV	RETURN	VOID	CANCEL
1	6	11	CLEAR	X/TIME	PLU	CHARGE
2	7	12	7	8	9	CHECK
3	8	13	4	5	6	SUB TOTAL
4	9	14	1	2	3	CASH / TEND
5	10	15	0	00	.	

Figure 3-6. 1-Station Model Key Board

2) 2-station model

PAPER FEED	DETL FEED	TAX	#/NS	CLERK	RA	PO
-	-%	+%	C/CONV	RETURN	VOID	CANCEL
1	6	11	CLEAR	X/TIME	PLU	ADD CHECK
2	7	12	7	8	9	CHARGE
3	8	13	4	5	6	CHECK
4	9	14	1	2	3	SUB TOTAL
5	10	15	0	00	.	CASH/ TEND

Figure 3-7. 2-Station Model Key Board

3-3 Operation

3-3-3 Initial Clear

1. Unplug the register.
2. Turn the control lock to the “S” position.
3. Press and hold the key position where the “**CASH**” key is located on the default keyboard layout.
4. While continuing to hold the “**CASH**” key, plug the register into a power source.
5. The message “***** INITIAL CLEAR *****” prints when the initial clear is complete.

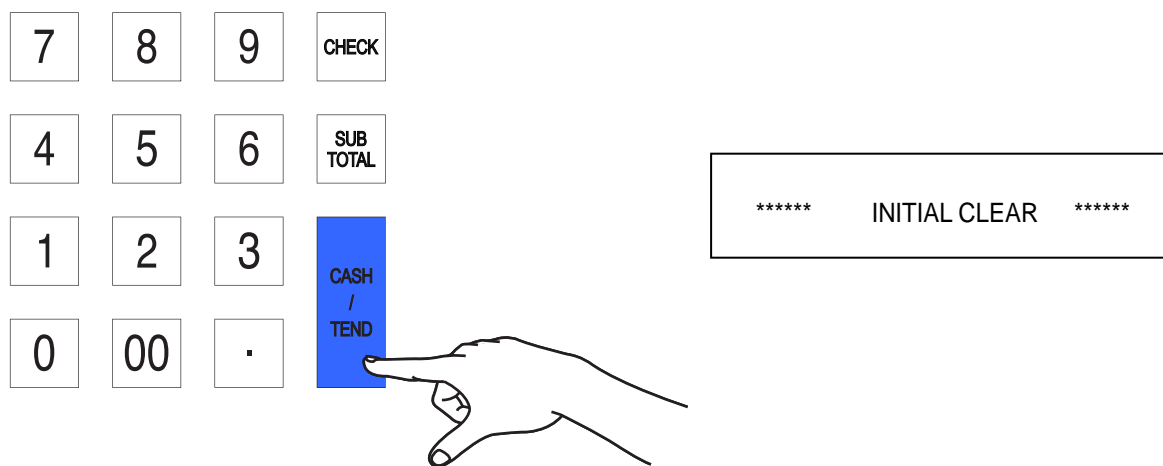


Figure3-8. Initial Clear Key & Print Sheet(ER-260)

3-3 Operation

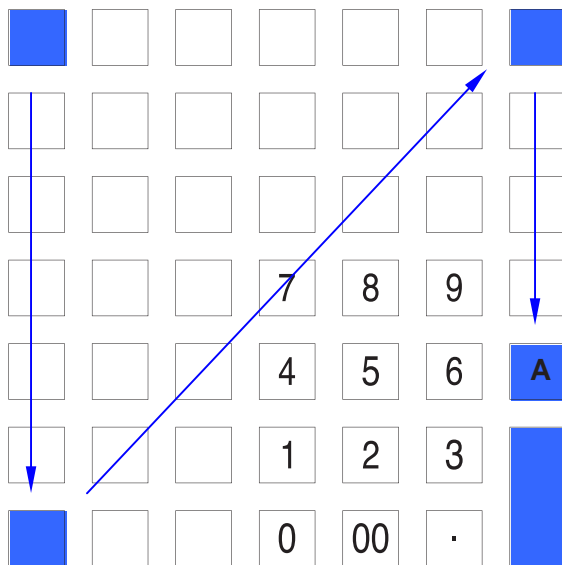
3-3-4 All Clear

This step insures that the cash register is cleared of any totals or programming. After this procedure, the cash register is ready for programming and operation.

WARNING: This is a one time procedure. Do not repeat this procedure after the cash register is programmed, it causes all programs and totals to be erased and to be default.

Note : Service Mode is not marked in a mode painting part.
Service Mode spins the Mode Key once just in a Program Mode to the right direction.
And need “ C ” key to execute a Service Mode.

1. Unplug the register.
2. Turn the control lock to the “S” position.
3. Press and hold the key position where the “A” key is located on the default keyboard layout.
4. Continue to hold the “A” key while plugging the register into a power source.
5. Press the upper left key of the keyboard, then the lower left key, then the upper right key, and finally press the lower right key.



```
*****
*          RAM ALL CLEAR OK !          *
*****

ER-260 EPROM INFO.
VERSION  : STD
CHECKSUM : d2e1
SRAM SIZE : 1MBits
SEP 08 2006

17:55                      01-09-2006
000001                      00
```

Figure3-9. All Clear Key Sequence & Print Sheet

3-3 Operation

3-3-6 Self Test

3-3-6(a) Test Printer

1. Turn the Mode switch to Service Mode position.
2. Press '1', '0' and '**SUB TOTAL**' key on key board.
3. Then the printer prints the test pattern.
4. After printing, The drawer is opened. Then the printer test is finished.

3-3-6(b) Test Display

1. Press '1', '1' and '**SUB TOTAL**' key on key board.
2. Then the buzzer will work for 1 sec.
3. After testing the buzzer, Some characters are displayed on the rear VFD display

3-3-6(c) Test Key Board

1. Press Press '1', '2' and '**SUB TOTAL**' key on key board.
2. Press any key you want on the key board.
3. The key code of pressed key will be showed on the VFD.
4. Turn the mode switch to any position to finish this test.

3-3-6(d) Test Mode Switch

1. Press Press '1', '3' and '**SUB TOTAL**' key on key board.
2. Turn the mode switch to any position.
3. The corresponding Mode name will be showed on the VFD.

3-3-6(e) Test RS232C

1. Install the serial loop back test jig. (Short "pin 2 , 3" , " pin 4 , 6") of DSUB connector.
2. Press Press '1', '4' and '**SUB TOTAL**' key on key board.
3. If error occurs, the message (232 NOGOOD) is displayed on VFD and the Buzzer beep. Then Press "**Clear**" key.

Note : When the ports is unconnected the cable , the Error occur.

MEMO

4 Disassembly and Assembly

Caution :

- Before installation, be sure to turn off the power switch.
- Use gloves to protect your hand from being cut by the angle and the chassis.
- Connect all the cables correctly. When connecting or disconnecting the cables, be careful not to apply stress to the cables. (It may cause disconnection)
- Be careful not to bind interface cables and AC power cord together.

Note : Before disassembling, first of all separate the ASS'Y CASE UPPER(B) from the ASS'Y CASE LOWER(E)

4-1 Disassembling the Case Upper Block

4-1-1 Ass'y Case Upper

1. Open the ASS'Y COVER PRINTER(A) and lift it off. (Page6-1, 6-2)
2. Remove the three screws(B11 : 2pcs, B-15 : 1pcs) from the ASS'Y CASE LOWER(E). (Page6-1,6-3,6-8)
3. Separate the five harnesses(㉔,㉕,㉖,㉗,㉘or㉙) from the PBA-MAIN BOARD(E-17). (Page6-3,6-8)
4. Lift off the ASS'Y CASE UPPER(B) from the ASS'Y CASE LOWER(E). (Page6-1,6-3,6-8)

4-1-2 Ass'y Front Display (VFD)

1. Separate the PBA DISPLAY FRONT & REAR(B33) from the ASS'Y CASE UPPER (B). (Page6-3)
2. Separate the two harnesses(㉚,㉛) from the PBA DISPLAY FRONT & REAR (B33).(Page6-3)
3. Separate the PMO-WINDOW VIEW_VFD(B8) from the ASS'Y CASE UPPER (B). (Page6-3)

4-1-3 Ass'y Front Display (LCD)

1. Separate the LCD ASS'Y (B34) & PBA DISPLAY(B32) from the ASS'Y CASE UPPER (B). (Page6-3)
2. Separate the two harnesses(㉜,㉝) from the PBA DISPLAY(B32).(Page6-3)
3. Separate the LABEL-SHEET(B39) from the LCD ASS'Y(B34).(Page6-3)
4. Separate the PMO-WINDOW VIEW_LCD(B9) from the ASS'Y CASE UPPER (B). (Page6-3)

4-1-4 Ass'y Journal(Rear) Printer

1. Separate the CAP-PRINTER(B2) and Remove the two screws(B3) from the ASS'Y CASE UPPER (B). (Page6-3)
2. Separate the JOURNAL PRINTER(B5) & HARNESS GND(B38), REAR LEVER-LOCK(B4). (Page6-3)
3. Separate the harness(㉞) from the PBA-JOURNAL(B28). (Page6-3)
4. Remove the two screws(B29) and Separate the PBA-JOURNAL(B28) from the ASS'Y CASE UPPER (B). (Page6-3)
5. Separate the harness(㉟) from the PBA-JOURNAL(B28) . (Page6-3)

4-1 Disassembling the Case Upper Block

4-1-5 Ass'y Receipt(Front) Printer

1. Remove the two screws(B20) and Separate the PBA-JOINT(B19) from the HOLDER-PRINTER (B16). (Page6-3)
2. Separate the three harnesses(Ⓐ,Ⓑ,Ⓒ) from the PBA-JOINT(B19). (Page6-3)
3. Remove the four screws(B17) and Separate the HOLDER-PRINTER (B16).from the ASS'Y CASE UPPER (B). (Page6-3)
4. Separate the CAP-PRINTER(B2) and Remove the two screws(B3) from the ASS'Y CASE UPPER (B). (Page6-3)
5. Separate the RECEIPT PRINTER(B5) & HARNESS GND(B6), FRONT LEVER-LOCK(B4). (Page6-3)

4-1-6 Ass'y Spool Motor

1. Separate the harness(Ⓓ) of the MOTOR DC (B-25) from the PBA DISPLAY FRONT(B33) or PBA DISPLAY(B32). (Page6-3)
2. Separate the RCT MOTOR(B24) & MOTOR DC(B25) from the HOLDER-MOTOR(B23). (Page6-3)

4-1-7 Ass'y Keyboard

1. Separate the three harnesses(Ⓜ,Ⓝ,Ⓚ) from the SWITCH-ROTARY(B30) & PBA MAIN(E17)(Page6-3)
2. Remove the four screws(B37) and Separate the ASS'Y KEYBOARD(B35 or B36) from the ASS'Y CASE UPPER (B). (Page6-3)

4-2 Disassembling the Case Lower Block

4-2-1 Ass'y Main PBA, Fiscal PBA and I/F PBA

1. Separate the ten harnesses(Ⓜ,Ⓟ,Ⓢ,Ⓣ,Ⓤ,Ⓥ,Ⓦ,Ⓧ,Ⓨ,Ⓩ) and remove the two screws(E16).
2. Lift up the PBA-MAIN PBA(E17) from the CASE LOWER(E24).(page6-8)
2. Lift up the ASS'Y FISCAL PBA(E27) from the CASE LOWER(E24).(page6-8)
3. Separate the harness (ⓐ) and Remove the screw(E12). (page6-8)
4. Lift up the I/F PBA(E13).(page6-8)

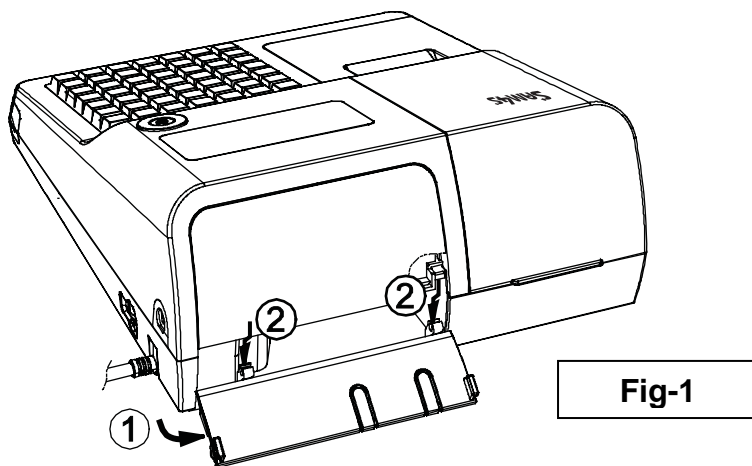
4-2-2 Ass'y Trans Power

1. Separate the harnesses(ⓐ,ⓑ) and Remove the two screws(E14). (page6-8)
2. Lift up the TRANS-POWER (E15) from the CASE LOWER(E24).(page6-8)

4-3 Advice as Disassembling

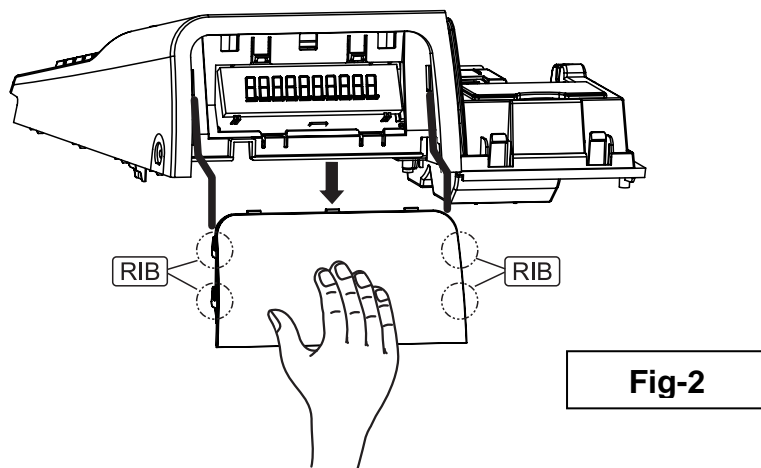
4-3-1 Disassembly of the Door Interface

- Rotate it as ① of the Fig-1 and pull out in the direction of ② to separate from ASS'Y CASE UPPER.



4-3-2 Disassembly of the Window Rear

- ① Be sure to separate the ASS'Y CASE UPPER from the ASS'Y CASE LOWER.
- ② Pull the WINDOW REAR out as the Fig-2 carefully not to break the four ribs.



4-3 Advice as Disassembling

4-3-3 Disassembly of the Rear VFD PCB

- ① Be sure to separate the ASS'Y CASE UPPER from the ASS'Y CASE LOWER.
- ② pull out in the direction of the Fig-3 to separate the REAR VFD PCB from the ASS'Y CASE UPPER.

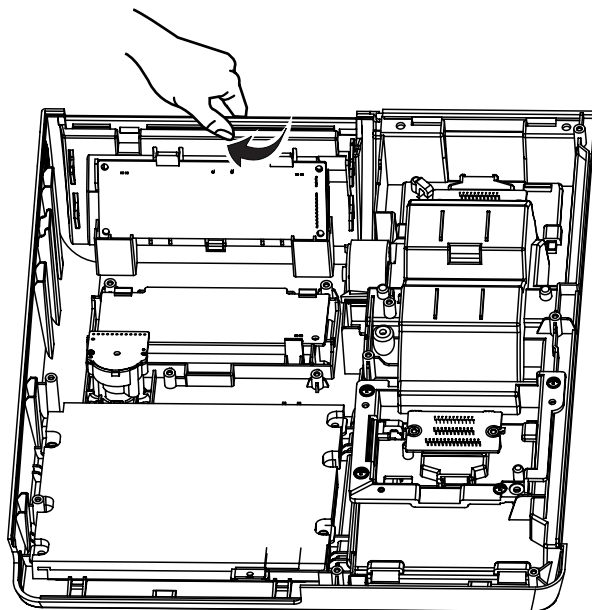
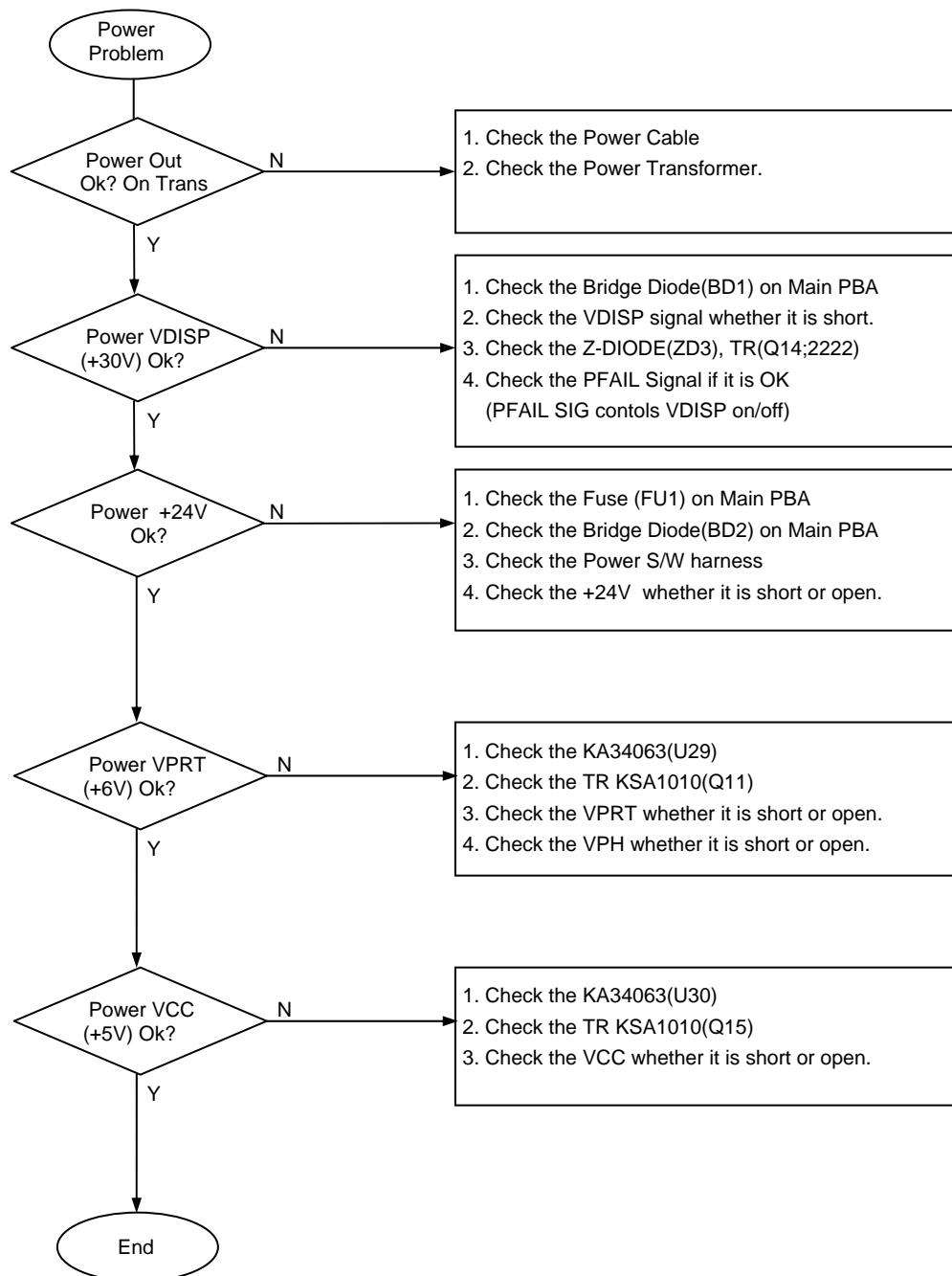


Fig-3

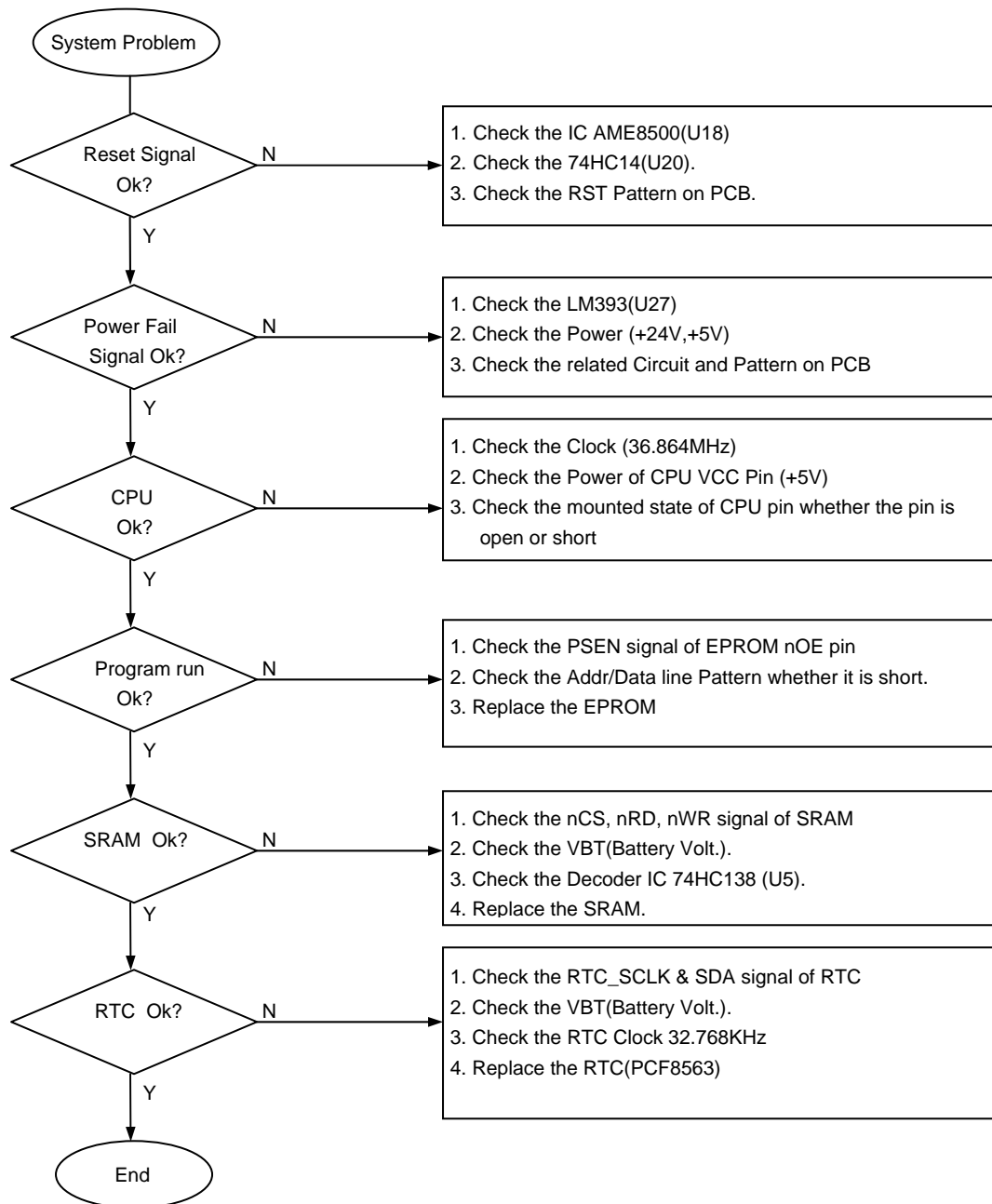
MEMO

5 Troubleshooting

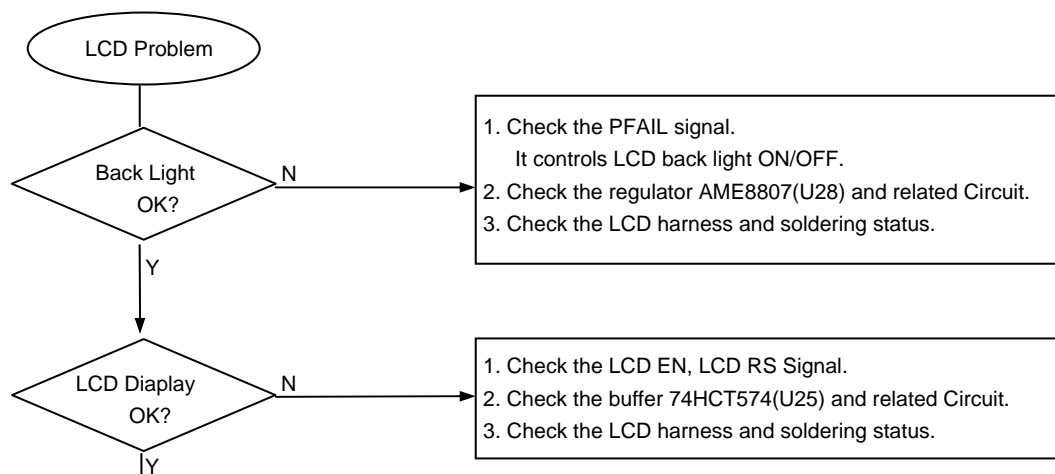
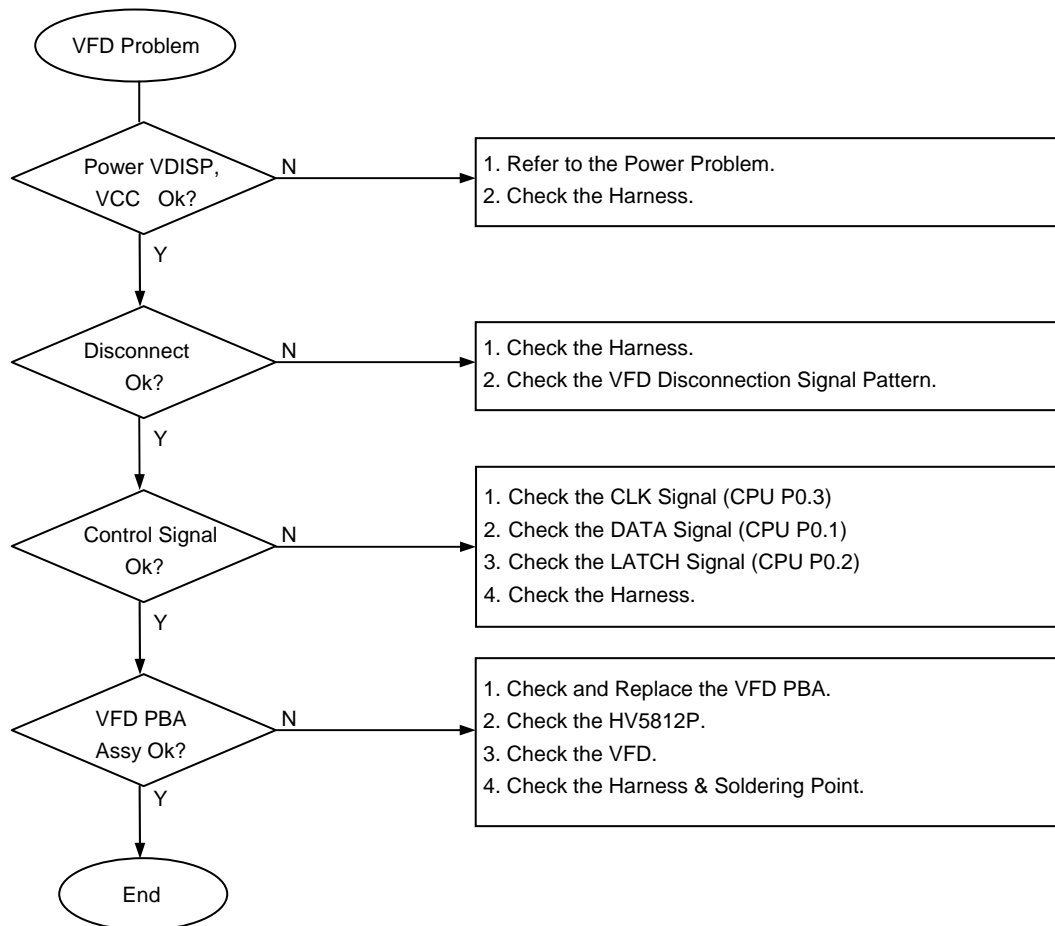
5-1 Troubleshooting

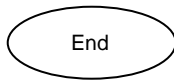


5-2 System Problem

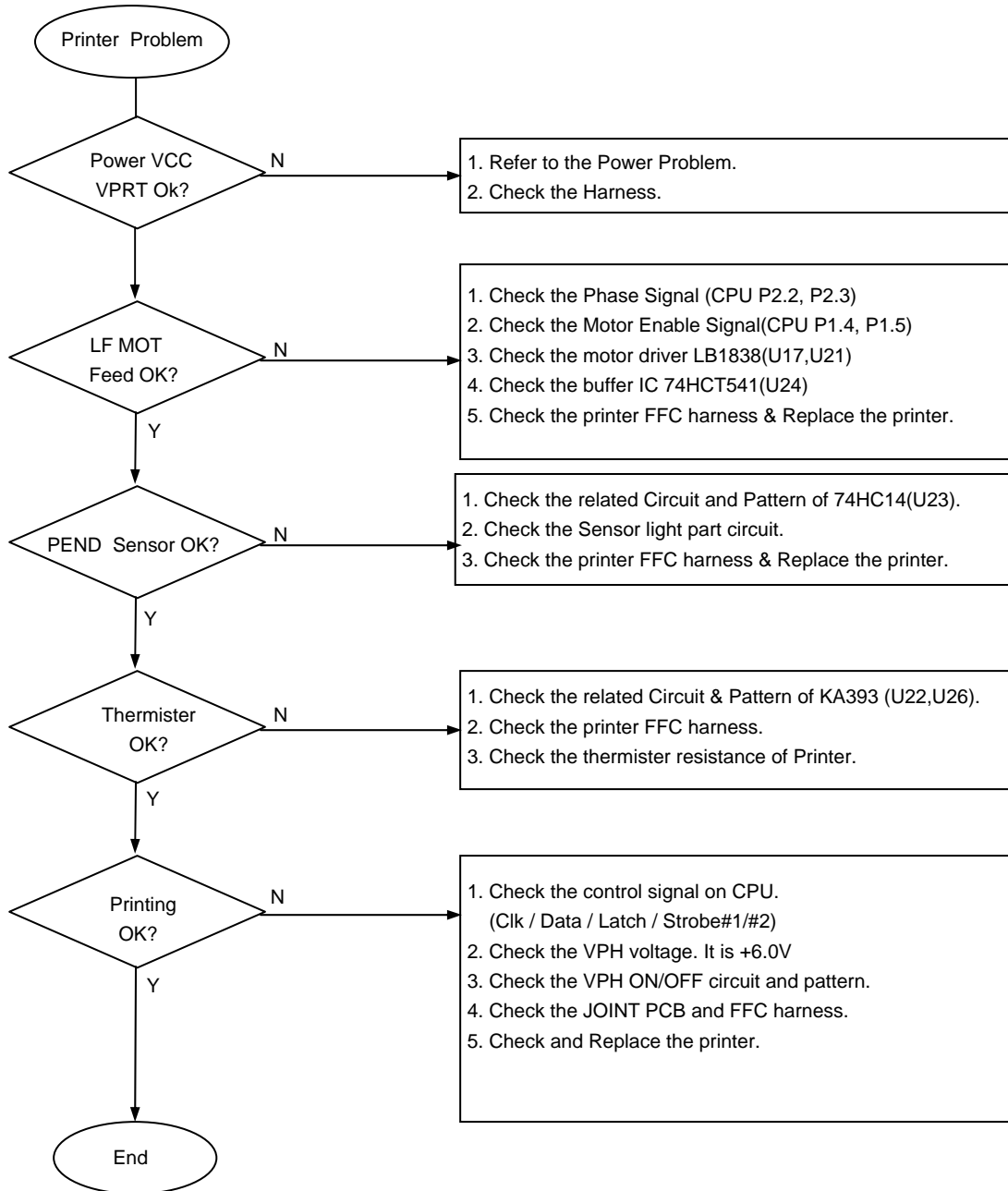


5-3 VFD & LCD Display Problem

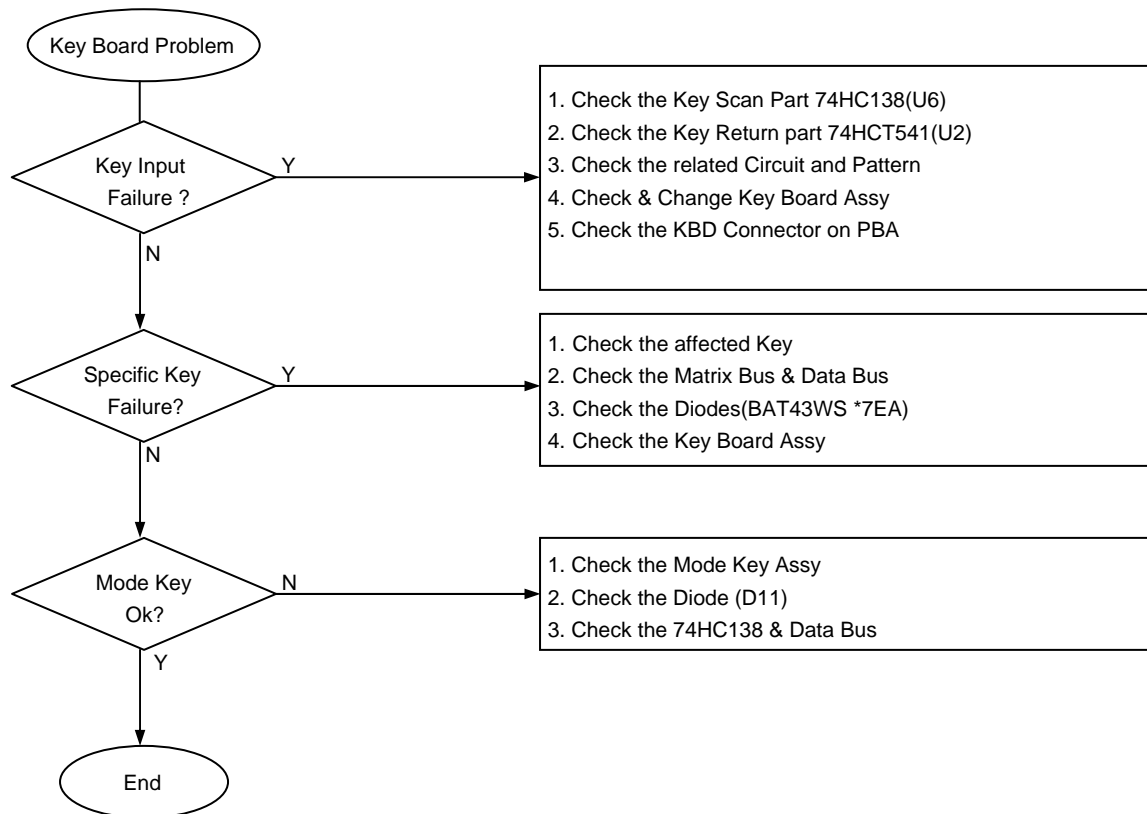




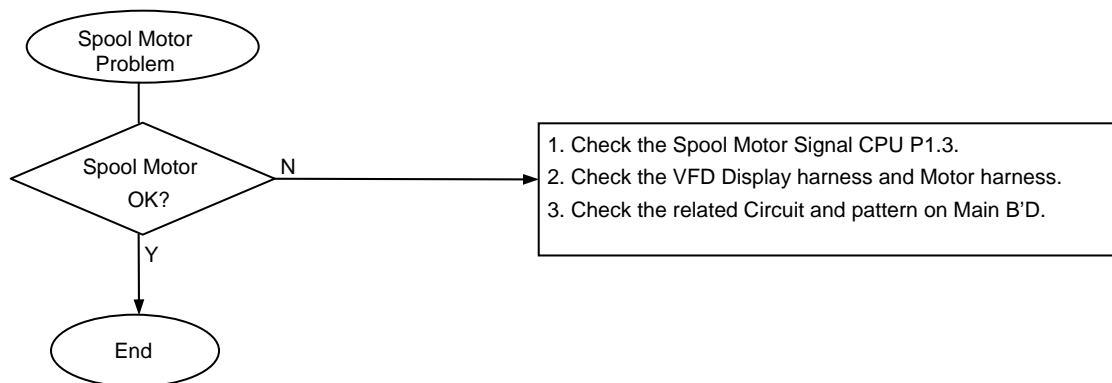
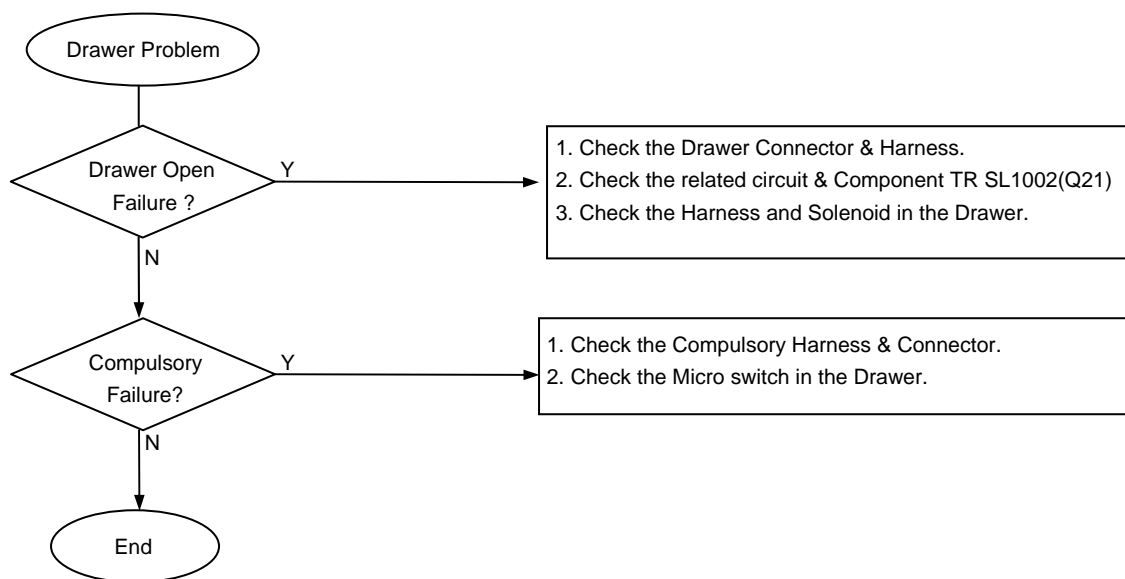
5-4 Thermal Printer Problem



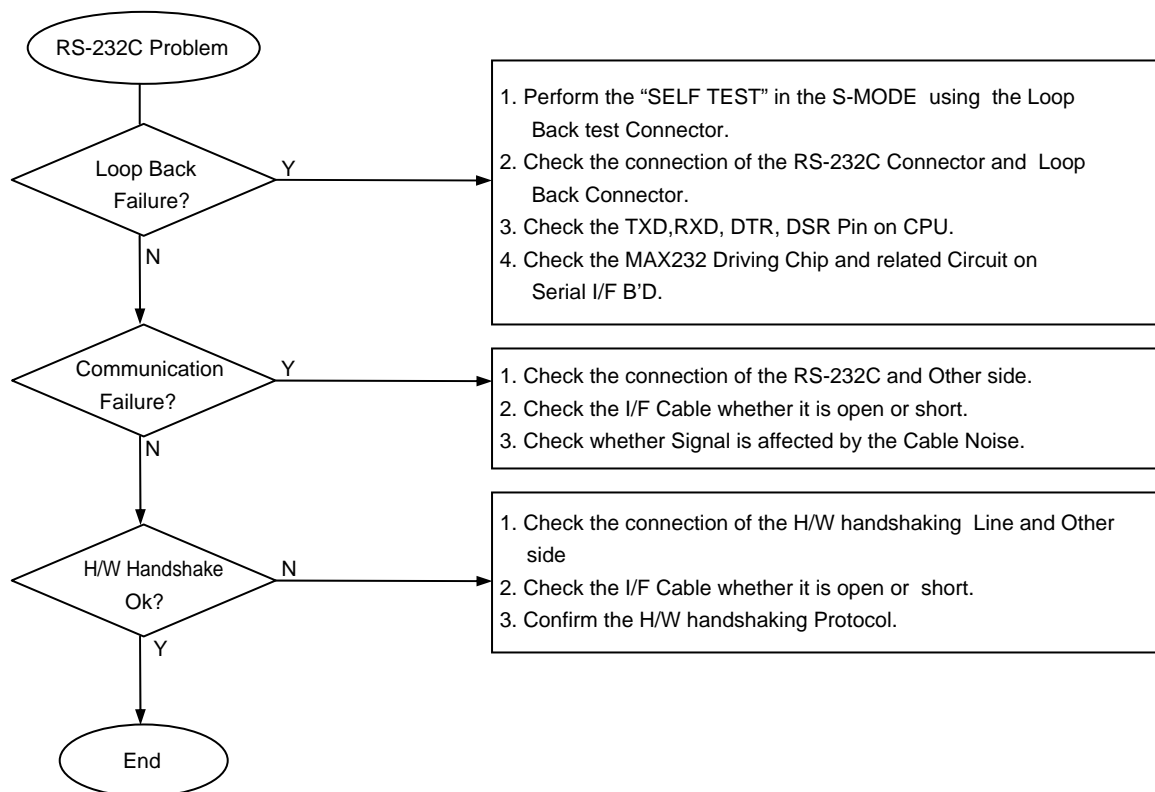
5-5 Key Board Problem



5-6 Drawer & Spool Motor Problem



5-7 Serial I/F Problem



5-7 Error Code

Error Code	Description	Remark
E1	Input Error	
E3	Printer Error (paper jam)	
E4	Non Add # required	
E5	Cash Declaration required	
E6	Cash Drawer is open	
E8	No Paper	

6 Exploded Views and Parts List

6-1 Main Set

[Exploded View]

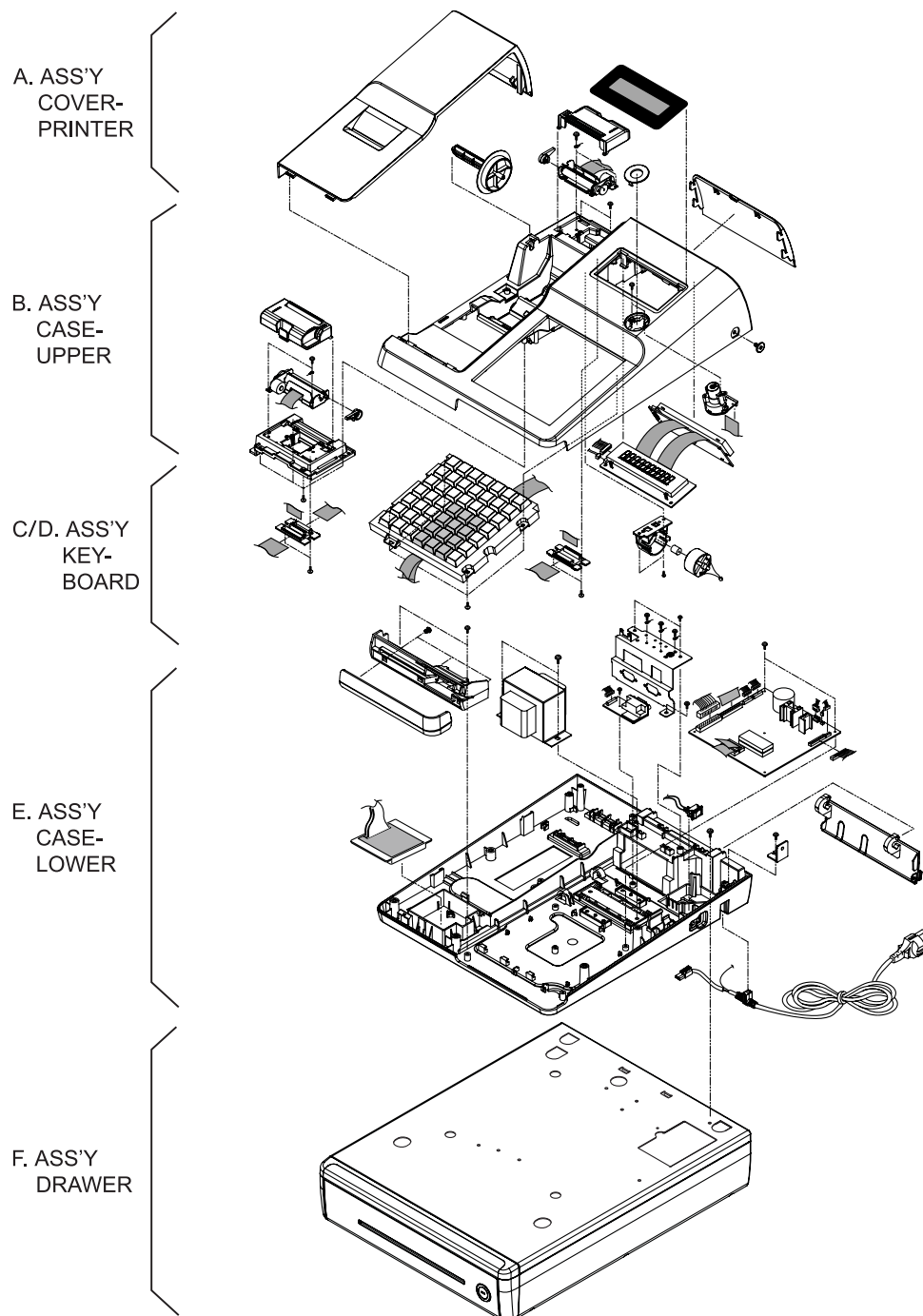


Figure6-1 Total Disassembly (ER-260)

6-1 Main Set

A. ASS'Y COVER-PRINTER

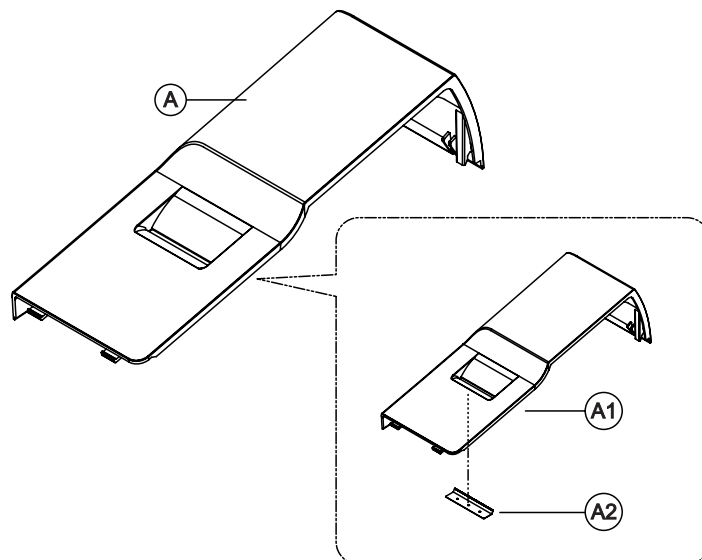


Figure 6-2. ASS'Y COVER-PRINTER

6.1. A. ASS'Y COVER-PRINTER

No.	Code No.	Description/ Specification	Q'ty	Design-Location	Serviceable	Remark
A	JK97-20056C	MEA COVER-PRINTER:ER-280	1		Y	IVORY
A1	JK72-20225C	PMO-COVER PRINTER	1		N	
A2	JK70-10320A	IPR-CUTTER PAPER	1		N	
A	JK97-20056D	MEA COVER-PRINTER:ER-280B	1		Y	BLACK
A1	JK72-20225D	PMO-COVER PRINTER	1		N	
A2	JK70-10320A	IPR-CUTTER PAPER	1		N	

6-1 Main Set

B. ASS'Y CASE-UPPER

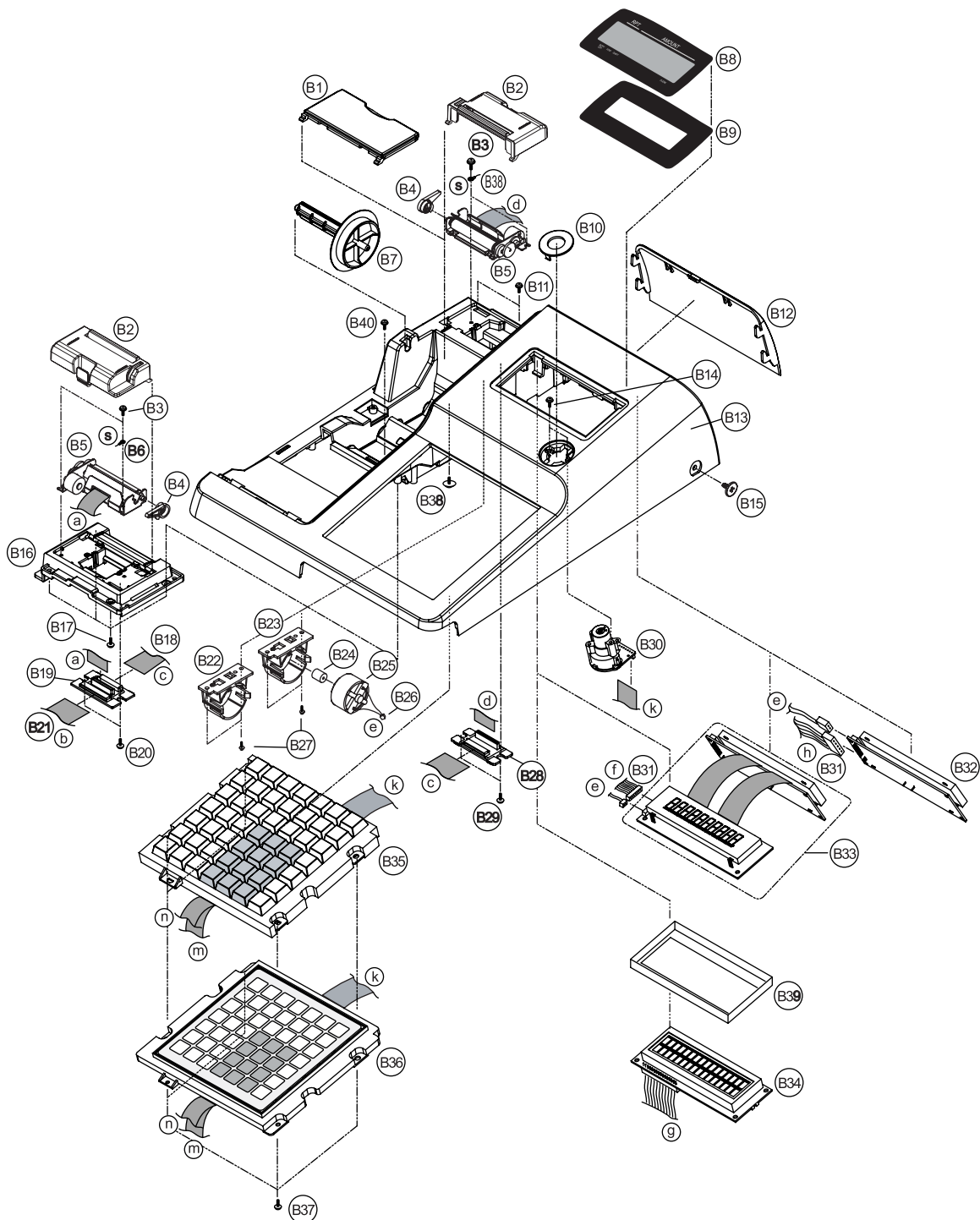


Figure 6-3. ASS'Y CASE-UPPER

6. Exploded Views and Parts List

6-1 Main Set

B. ASS'Y CASE-UPPER

No.	Code No.	Description/ Specification	Q'ty	Design-Location	Serviceable	Remark
B1	JK72-20234A	PMO-COVER 1STATION	1	1 STATION	Y	IVORY, 2ST=X
	JK72-20234B	PMO-COVER 1STATION	1	1 STATION	Y	BLACK, 2ST=X
B2	JK72-20232B	PMO-CAP PRINTER_N	2		Y	1ST=1, 2ST=2,
B3	JK70-50057A	SCREW-TAPPING:BH,+2,M2.6,L10	4		Y	1ST=2, 2ST=4
B4	JK72-20235A	PMO-LEVER LOCK_N	2		Y	1ST=1, 2ST=2
B5	JK59-20009A	UNIT-PRINTER	2		Y	1ST=1, 2ST=2
B6	JK39-40682A	HARNESS-GND WIRE(1-STATION)	1		Y	
	JK39-40683A	HARNESS-GND WIRE(2-STATION)	1		Y	
B7	JK72-20231A	PMO-SPOOL WINDING	1		Y	
B8	JK72-20237A	PMO-WINDOW VIEW_VFD	1	VFD MODEL	Y	ER-260/265
B9	JK72-20247A	PMO-WINDOW VIEW_LCD	1	LCD MODEL	Y	
B10	JK72-20226A	PMO-COVER MODE,IVORY	1		Y	NON FISCAL
	JK72-20226B	PMO-COVER MODE,BLACK	1		Y	NON FISCAL
	JK72-20226C	PMO-COVER MODE,IVORY	1		Y	FISCAL
	JK72-20226D	PMO-COVER MODE,BLACK	1		Y	FISCAL
B11	6002-000171	SCREW-TAPPING:PH,+2S,M4,L10	2		Y	
B12	JK72-20230A	PMO-REAR WINDOW	1		Y	
B13	JK72-20223A	PMO-CASE UPPER	1		Y	IVORY
	JK72-20223B	PMO-CASE UPPER	1		Y	BLACK
B14	6002-000319	SCREW-TAPPING:PH,+2,M3,L8	2		Y	
B15	JK70-50054A	SCREW-MACHINE:BH,Ø12,M4,L8	1		Y	
B16	JK72-20233A	PMO-HOLDER PRINTER_N	1		Y	IVORY
	JK72-20233B	PMO-HOLDER PRINTER_N	1		Y	BLACK
B17	6002-000174	SCREW-TAPPING:PWH,+2,M3,L10	4		Y	
B18	JK39-40566A	HARNESS-FFC:260,22P,250mm	1		Y	
B19	JK92-01474A	PBA JOINT(R):ER-260,SVC	1		Y	
B20	6002-000174	SCREW-TAPPING:PWH,+2,M3,L10	2		Y	
B21	JK39-40565A	HARNESS-PRINTER FFC:30P	1		Y	
B22	JK72-40975B	PMO-HOLDER MOTOR	1		Y	NO MOTOR
B23	JK72-40975A	PMO-HOLDER MOTOR	1		Y	With MOTOR
B24	JK73-30200A	RCT-MOTOR	1		Y	
B25	3101-001071	MOTOR-DC	1		Y	
B26	JK39-40686A	HARNESS-SPOOL	1		Y	
B27	6002-000174	SCREW-TAPPING:PWH,+2,M3,L10	2	2 STATION	Y	
B28	JK92-01475A	PBA JOINT(JOURNAL)	1		Y	
B29	6002-000174	SCREW-TAPPING:PWH,+2,M3,L10	2	2 STATION	Y	
B30	3406-000116	SWITCH-ROTARY	1		Y	
B31	JK39-40685A	HARNESS-DISPLAY:ER-260,10P	1		Y	
B32	JK92-01476B	PBA DISPLAY:REAR ONLY	1	LCD MODEL	Y	ER-260M
B33	JK92-01476A	PBA DISPLAY:FRONT&REAR	1	VFD MODEL	Y	ER-260
B34	JK96-01080E	LCD ASS'Y: 2 LINE	1		Y	
B35	JK59-30028A	UNIT-KEYBOARD: 49KEY,RAISED	1	ER-260(STD)	Y	BLACK
B36	JK59-30029A	UNIT-KEYBOARD:49KEY,FLAT	1		Y	ER-265(STD)
B37	6002-000174	SCREW-TAPPING:PWH,+2,M3,L10	4		Y	
B38	JK70-50029A	SCREW-TAPPING:PWH,M3,L6,Ø10	1		Y	
B39	JK68-40073A	LABEL(R) LCD SHEET	1	LCD MODEL	Y	
B40	6003-000198	SCREW-TAPPING:PWH,+2,M3,L12	1		Y	

6-1 Main Set

C. ASS'Y KEY BOARD(RAISED, 49KEY)

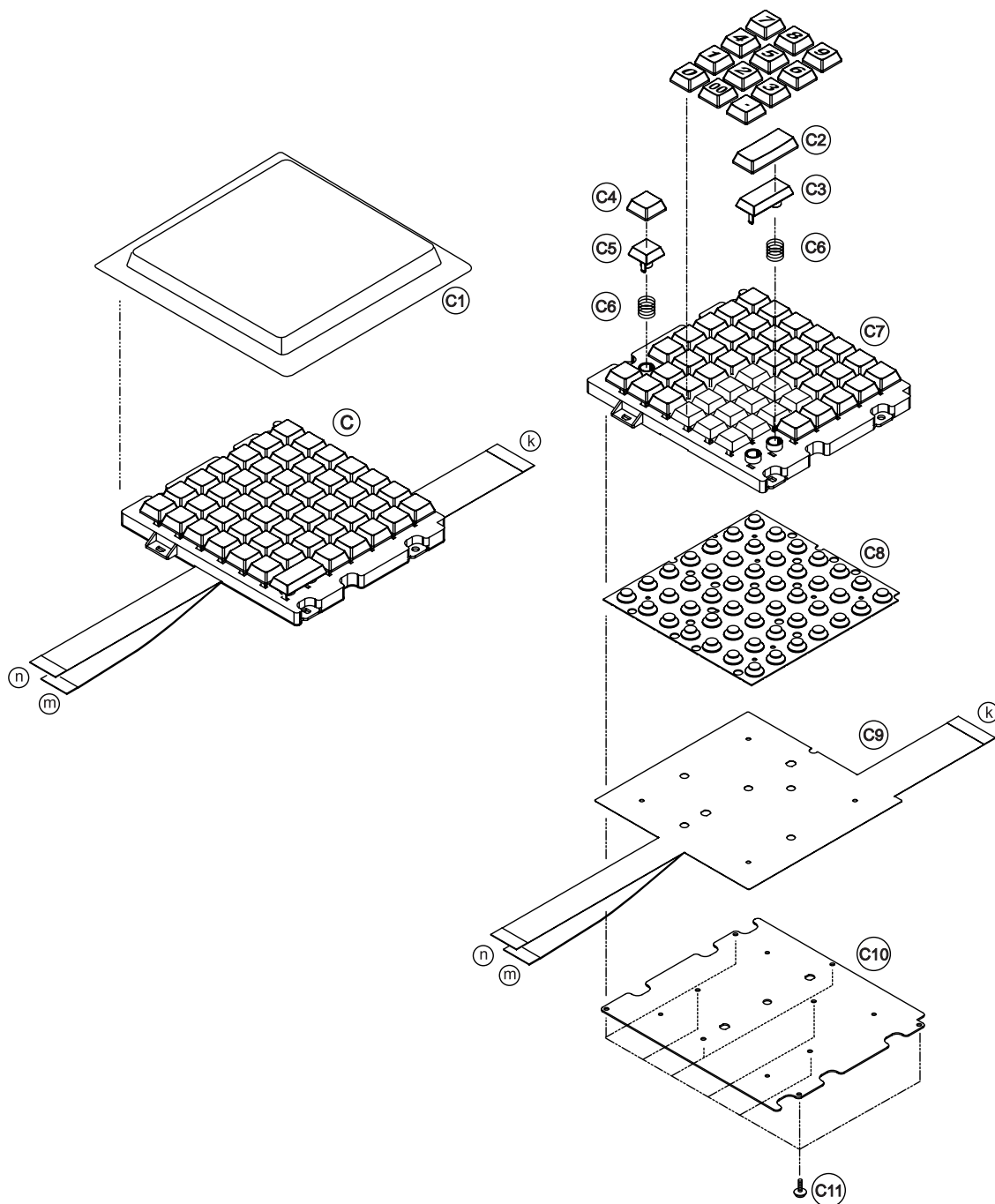


Figure 6-4. ASS'Y KEY BOARD(RAISED)

6-1 Main Set

C. ASS'Y KEY BOARD(RAISED, 49KEY)

No.	Code No.	Description/ Specification	Q'ty	Design-Location	Serviceable	Remark
C	JK59-30028A	UNIT-KEYBOARD	1		Y	
C1	JK73-20218A	WATER PROOF	1		Y	
C2	JK81-20057C	KEY CAP_2X1	1		Y	
C3	JK81-20057B	KEY TOP_2X1(VERTICAL)	1		Y	
	JK81-20057E	KEY TOP_1X2(HORIZONTAL)	1		Y	
C4	JK81-20057H	KEY CAP_1X1	47		Y	
C5	JK81-20057G	KEY TOP_1X1	47		Y	
C6	JK81-20061A	RETURN-SPRING	49		Y	
C7	JK81-20050A	PMO KBD HOUSING_49,RAISED	1		Y	
C8	JK81-20050D	CONTACT RUBBER_49,RAISED	1		Y	
C9	JK81-20050C	ASSY-FPC_49,RAISED	1		Y	
C10	JK81-20050B	IPR BOTTOM PLATE_49,RAISED	1		Y	
C11	JK81-20058A	SCREW-TAPPING:BH,2.6X6	9		Y	

6-1 Main Set

D. ASS'Y KEY BOARD(FLAT, 49KEY)

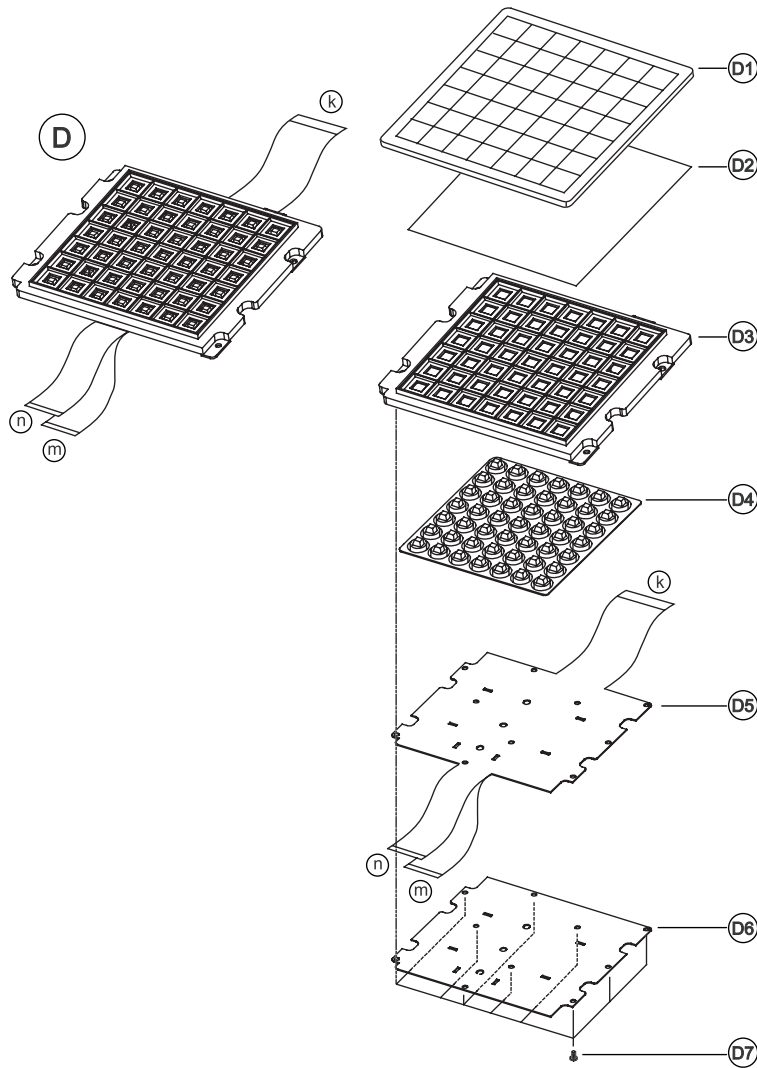


Figure 6-5. ASS'Y KEY BOARD(FLAT)

D. ASS'Y KEY BOARD(FLAT, 49KEY)

No.	Code No.	Description/ Specification	Q'ty	Design-Location	Serviceable	Remark
D	JK59-30029A	UNIT-KEYBOARD	1		Y	
D1	JK73-20219A	WATER-PROOF	1		Y	
D2	JK68-40076A	LABEL(P)- KEYBOARD SHEET	1		Y	ENGLISH(STD)
D3	JK81-20009B	PMO-KBD HOUSING	1		Y	
D4	JK81-20012A	KEY-RUBBER,49KEY,FLAT	1		Y	
D5	JK81-20051A	ASSY-FPC,49KEY,FLAT	1		Y	
D6	JK81-20011B	KBD-FRAME	1		Y	
D7	JK81-20058A	SCREW-TAPPING:BH,2.6X6	9		Y	

6-1 Main Set

E. ASS'Y CASE-LOWER

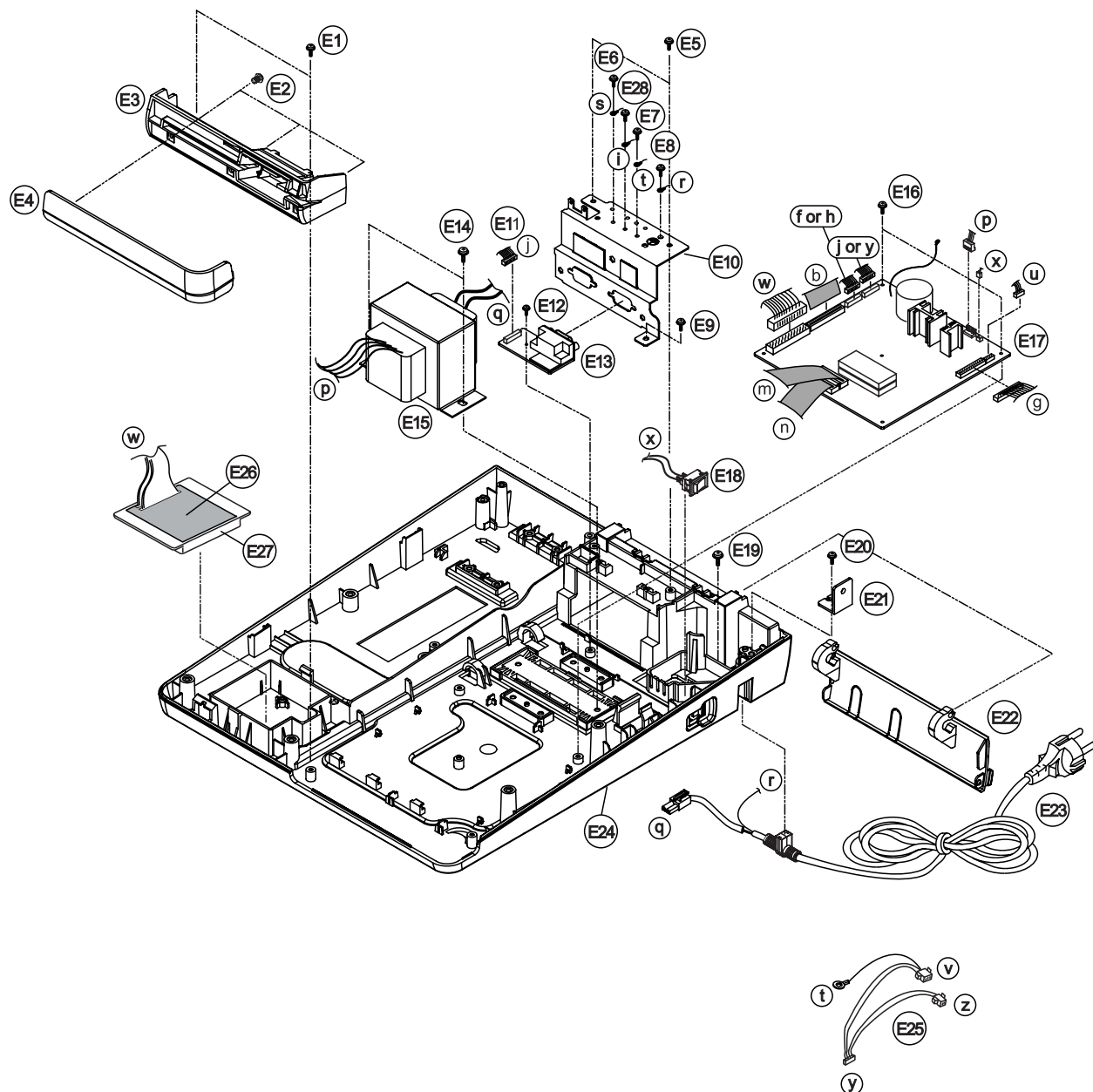


Figure 6-6. ASS'Y CASE-LOWER

6-1 Main Set

E. ASS'Y CASE-LOWER

No.	Code No.	Description/ Specification	Q'ty	Design-Location	Serviceable	Remark
E1	6002-000174	SCREW-TAPPING: PWH,M3,L10	2		Y	
E2	6002-000174	SCREW-TAPPING: PWH,M3,L10	3		Y	
E3	JK72-20228A	PMO-HOLDER MSR	1		Y	
E4	JK72-20246A	PMO-COVER FRONT	1		Y	IVORY
	JK72-20246B	PMO-COVER FRONT	1		Y	BLACK
E5	6002-000174	SCREW-TAPPING: PWH,M3,L10	2		Y	
E6	JK60-00001A	SCREW-ASSY TAPTITE:M3,L8	1		Y	
E7	JK60-00001A	SCREW-ASSY TAPTITE:M3,L8	1		Y	
E8	6006-000187	SCREW-ASS'Y MACHINE:M4,L6	1		Y	
E9	JK60-00001A	SCREW-ASSY TAPTITE:M3,L8	1		Y	
E10	JK70-20060A	IPR-BRKT INTERFACE	1		N	1 SERIAL
E11	JK39-40687A	HARNESS-I/F:6P	1		Y	
E12	6002-000175	SCREW-TAPPING: PWH,M3,L8	1		Y	
E13	JK92-01473A	PBA INTERFACE:ER-260, 232*1	1		Y	
E14	JK70-50056A	SCREW-TAPPING: PWH,M4,L10	2		Y	
E15	JK26-00012A	TRANS POWER:EUROPE(230V)	1		Y	
	JK26-00013A	TRANS POWER:USA(120V)	1		Y	
E16	6002-000174	SCREW-TAPPING: PWH,M3,L10	2		Y	
E17	JK92-01472A	PBA MAIN: LCD,2ST,5MBIT	1		Y	ER-260M
	JK92-01472B	PBA MAIN: VFD,1STA,1MBIT	1		Y	ER-260
	JK92-01472C	PBA MAIN: LCD,2STA,FISCAL	1		Y	ER-260MF
	JK92-01472D	PBA MAIN: LCD,1STA,STD	1		Y	ER-260M
E18	JK39-40688A	HARNESS-POWER S/W:2P	1		Y	
E19	6003-001149	SCREW-TAPTITE: PWH,+,S,M4,L10	1		Y	
E20	6002-000171	SCREW-TAPPING: PH,+,2S,M4,L10	1		Y	
E21	JK70-10002A	IPR-BRKT CASING	1		Y	
E22	JK72-20227A	PMO-DOOR INTERFACE	1		Y	
E23	JK39-10522A	POWER-CORD:EUROPE,IVORY	1		Y	
	JK39-10523A	POWER-CORD:EUROPE,D/GRAY	1		Y	
	JK39-10522B	POWER-CORD:USA,IVORY	1		Y	
	JK39-10523B	POWER-CORD:USA,D/GRAY	1		Y	
	JK39-10522C	POWER-CORD:AUSTRALIA,IVORY	1		Y	
	JK39-10523C	POWER-CORD:AUSTRALIA,D/GRAY	1		Y	
	JK39-10522D	POWER-CORD:UK,IVORY	1		Y	
	JK39-10523D	POWER-CORD:UK,D/GRAY	1		Y	
E24	JK72-20224A	PMO-CASE LOWER	1		Y	IVORY
	JK72-20224B	PMO-CASE LOWER	1		Y	BLACK
E25	JK39-40603A	HARNESS-DW/COMP:4P	1		Y	
E26	JK92-01284C	PBA SUB-FISCAL:1MBIT,34P	1		Y	FISCAL
	JK92-01284D	PBA SUB-FISCAL:2MBIT,34P	1		Y	FISCAL
E27	JK72-40205A	PMO-CASE FISCAL BOARD	1		Y	FISCAL

6-2 DRAWER (SMALL:Bplus)

F. ASS'Y DRAWER (SMALL)

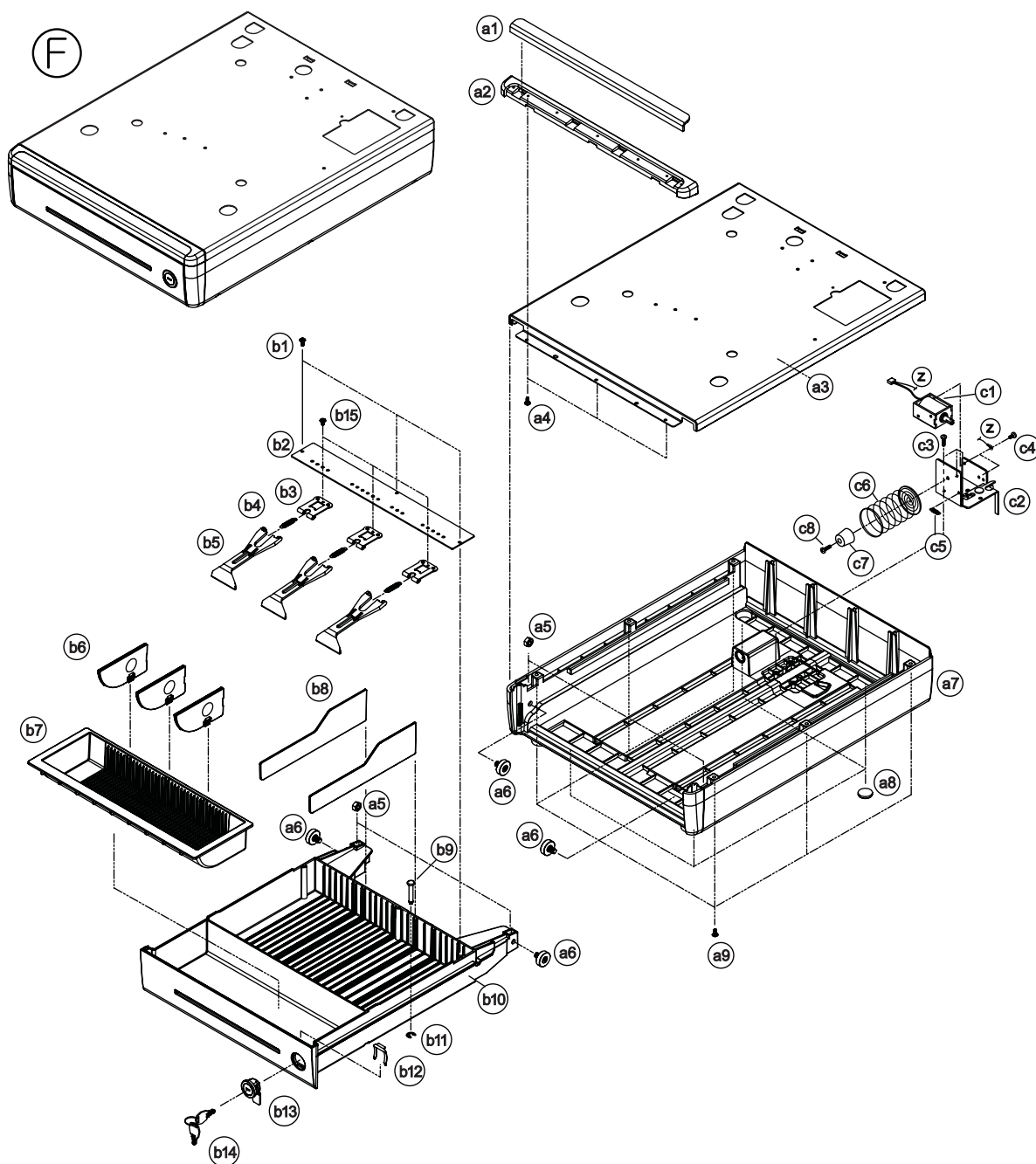


Figure 6-7. ASS'Y DRAWER

6-2 DRAWER (SMALL:Bplus)

F. ASS'Y DRAWER (SMALL)

No.	Code No.	Description/ Specification	Q'ty	Design-Location	Serviceable	Remark
F	JK75-20035A	MEC-DRAWER E43LA :3B4C,24V,LOCK,WHITE	1		Y	EDR-E43LA
	JK75-20035B	MEC-DRAWER E43LAB :3B4C,24V,LOCK,BLACK	1		Y	EDR-E43LAB
	JK75-20036A	MEC-DRAWER E44LA :4B4C,24V,LOCK,WHITE	1		Y	EDR-E44LA
	JK75-20036B	MEC-DRAWER E44LAB :4B4C,24V,LOCK,BLACK	1		Y	EDR-E44LAB

a. ASS'Y HOUSING

No.	Code No.	Description/ Specification	Q'ty	Design-Location	Serviceable	Remark
a1	JK72-20044A	PMO-COVER DECO	1		Y	
a2	JK72-20045A	PMO-COVER FRONT	1		Y	WHITE
	JK72-20045B	PMO-COVER FRONT	1		Y	BLACK
a3	JK70-20063A	IPR-HOUSING DRAWER	1		Y	WHITE
	JK70-20063B	IPR-HOUSING DRAWER	1		Y	BLACK
a4	JK70-50059A	SCREW-TAPTITE:BH,M3,L8,PI5.5	3		Y	
a5	6021-000243	NUT-HEXAGON:M6	4		Y	
a6	JK75-10386A	MEC-ROLLER	4		Y	
a7	JK72-20243A	PMO-COVER BOTTOM	1		Y	WHITE
	JK72-20243B	PMO-COVER BOTTOM	1		Y	BLACK
a8	JK61-40201A	FOOT	4		Y	
a9	6003-000267	SCREW-TAPTITE:PWH,M3,L 8	6		Y	

b. ASS'Y TRAY

No.	Code No.	Description/ Specification	Q'ty	Design-Location	Serviceable	Remark
b1	JK70-50059A	SCREW-TAPTITE:BH,M3,L8,PI5.5	3		Y	
b2	JK70-10307A	IPR-PLATE HOLDER	1		Y	
b3	JK70-10314A	IPR-HOLDER LEVER	3		Y	
b4	6107-000134	SPRING-ES	3		Y	
b5	JK72-40267A	PMO-LEVER PRESS	3		Y	
b6	JK72-20241A	PMO-COIN PARTITION	5		Y	WHITE
	JK72-20241B	PMO-COIN PARTITION	5		Y	BLACK
b7	JK72-20242A	PMO-COIN TILL	1		Y	WHITE
	JK72-20242B	PMO-COIN TILL	1		Y	BLACK
b8	JK72-40240B	PMO-BILL PARTITION	2		Y	WHITE
	JK72-40240C	PMO-BILL PARTITION	2		Y	BLACK
b9	JK70-40302A	ICT-SHAFT PIN	1		Y	
b10	JK72-20240A	PMO-BILL COIN TRAY	1		Y	WHITE
	JK72-20240B	PMO-BILL COIN TRAY	1		Y	BLACK
b11	6044-000124	RING-E:ID3, OD7	1		Y	
b12	JK70-10323A	IPR-PLATE CLIP	1		Y	
b13	JK75-10389C	MEC-LOCK	1		Y	
b14	JK70-20025B	IPR-KEY DRAWER	1		Y	
b15	JK70-50059A	SCREW-TAPTITE:BH,M3,L8,PI5.5	3		Y	

6-2 DRAWER (SMALL:Bplus)

F. ASS'Y DRAWER (SMALL)**c. ASS'Y LOCK**

No.	Code No.	Description/ Specification	Q'ty	Design-Location	Serviceable	Remark
c1	JK33-10500A	SOLENOID-DC :24V	1		Y	
	JK33-10500D	SOLENOID-DC :12V	1		Y	
	JK27-10500A	SOLENOID-DC :7V	1		Y	
c2	JK75-10387A	MEC-LOCK LEVER	1		Y	
c3	6002-000201	SCREW-TAPPING(RH):M4,L12	3		Y	
c4	6001-000131	SCREW-MACHINE(BH):M3,L6	2		Y	
c5	6107-000126	SPRING-ES	1		Y	
c6	JK70-30017A	SPRING-PUSH	1		Y	
c7	JK73-20210B	REX-BUMPER	1		Y	
c8	6002-000157	SCREW-TAPPING(PH):M4,L14	1		Y	

6-2 DRAWER (MIDDLE)

G. ASS'Y DRAWER (MIDDLE)

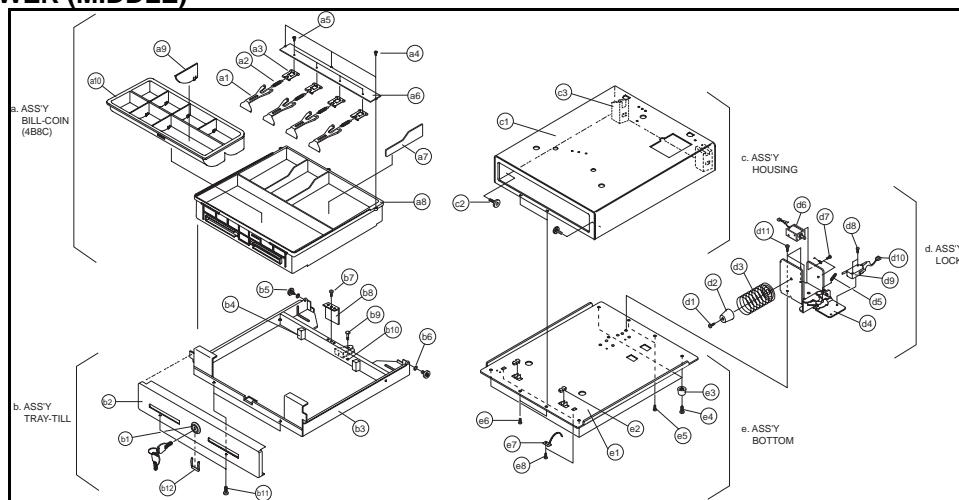


Figure 6-8. ASS'YDRAWER (4B/8C)

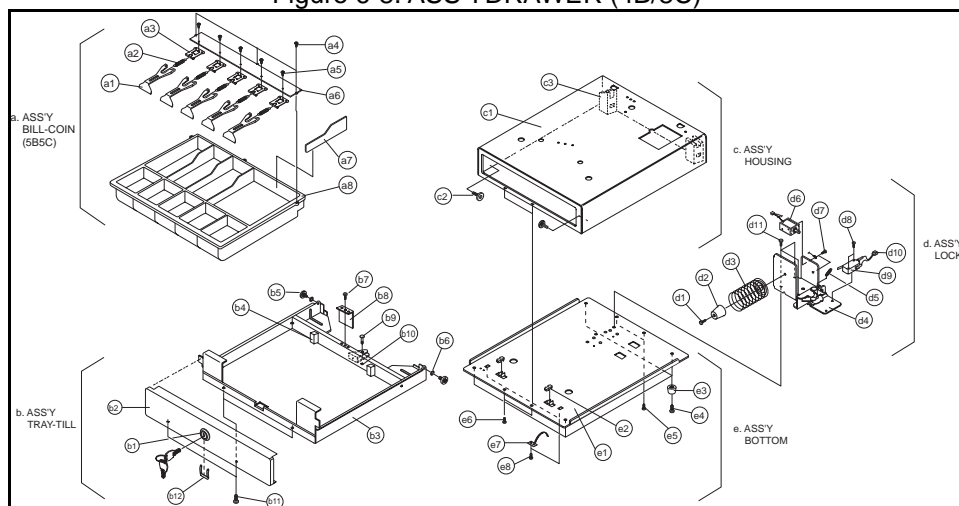


Figure 6-9. ASS'YDRAWER (5B/5C)

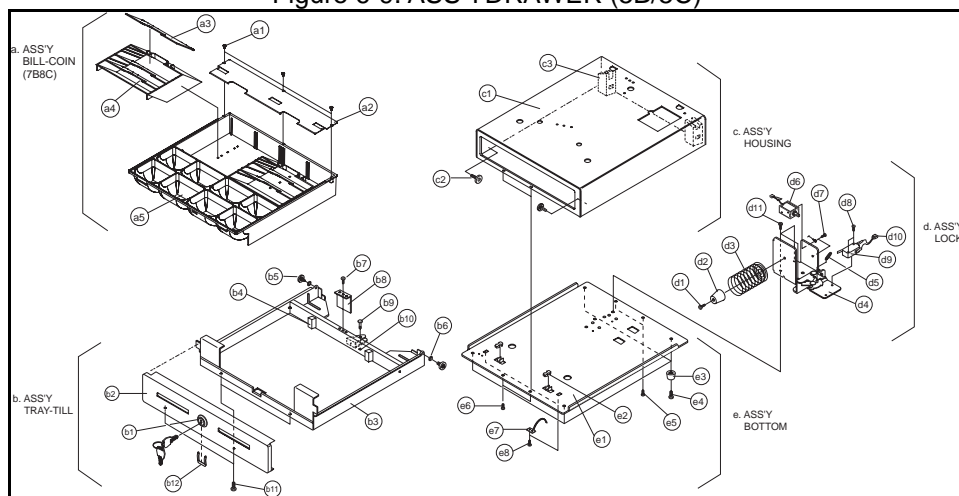


Figure 6-10. ASS'YDRAWER (7B/8C)

6-2 DRAWER (MIDDLE)

G. ASS'Y DRAWER (MIDDLE)

a. Ass'y Bill-Coin (4B/8C, 5B/5C)

No.	Code No.	Description / Specification	Q'ty	Design-Location	Serviceable	Remark
a	JK97-20014A	MEA-UNIT BILL COIN: 4B8C	1		Y	
	JK97-00407A	MEA-UNIT BILL COIN: 5B5C	1		Y	
a-1	JK72-40267A	PMO-LEVER PRESS	4		Y	
a-2	6107-000134	SPRING ES	4		Y	
a-3	JK70-10314A	IPR-HOLDER LEVER	4		Y	
a-4	6002-000175	SCREW-TAPPING	3		Y	
a-5	6002-001078	SCREW-TAPPING	4		Y	
a-6	JK70-10304A	IPR-PLATE HOLDER	1		Y	
a-7	JK72-40269A	PMO-PANEL PARTITION	3		Y	
a-8	JK72-20088A	PMO-BILL COIN TILL: 4B8C	1		Y	
	JK72-40268A	PMO-BILL COIN TILL: 5B5C	1		Y	
a-9	JK72-20090A	PMO-COIN PARTITION: 4B8C	6		Y	
a-10	JK72-20089A	PMO-COIN TILL: 4B8C	1		Y	

a. Ass'y Bill-Coin (7B/8C)

No.	Code No.	Description / Specification	Q'ty	Design-Location	Serviceable	Remark
a	JK97-01103A	MEA-UNIT BILL COIN: 7B8C	1		Y	
a-1	6002-000175	SCREW-TAPPING	3		Y	
a-2	JK70-00068A	IPR-HOLDER PLATE	1		Y	
a-3	JK72-00083A	PMO-BILL PARTITION	5		Y	
a-4	JK72-00082A	PMO-BILL TILL	2		Y	
a-5	JK72-00084A	PMO-BILL COIN TILL	1		Y	

6-2 DRAWER (MIDDLE)

b. Ass'y Tray-Till

No.	Code No.	Description / Specification	Q'ty	Design-Location	Serviceable	Remark
b	JK97-01073B	MEA-UNIT TRAY TILL: 5B5C	1		Y	
	JK97-01073D	MEA-UNIT TRAY TILL: 4B8C,7B8C(EURO)	1		Y	
b-1	JK75-10389A	MEC-LOCK: DRAWER	1		Y	
b-2	JK70-10014A	IPR-PANEL FRONT : 5B5C	1		Y	WHITE
	JK70-10014B	IPR-PANEL FRONT : 4B8C, 7B8C	1		Y	WHITE
	JK70-10014C	IPR-PANEL FRONT : 4B8C, 7B8C	1		Y	BLACK
	JK70-10014D	IPR-PANEL FRONT : 5B5C	1		Y	BLACK
b-3	JK75-00025A	MEA-TRAY TILL: 4B8C,7B8C	1		N	
	JK75-00025B	MEA-TRAY TILL: 5B5C	1		N	
b-4	JK73-10203A	RPR-TENSION	2		N	
b-5	JK75-10386A	MEC-ROLLER	2		Y	
b-6	6031-000549	WASHER-PLAIN	2		Y	
b-7	6003-000221	SCREW-TAPTITE	1		Y	
b-8	JK70-10324A	IPR-SUPPORT TRAY	1		N	
b-9	JK70-40302A	ICT,SHAFT PIN	1		N	
b-10	6044-000124	RING-E	1		Y	
b-11	6002-001042	SCREW-TAPPING	2		Y	
b-12	JK70-10323A	IPR-PLATE CLIP	1		Y	

c. Ass'y Housing

No.	Code No.	Description / Specification	Q'ty	Design-Location	Serviceable	Remark
c	JK97-01074A	MEA-COVER HOUSING	1		Y	WHITE
	JK97-01074B	MEA-COVER HOUSING: NONE HOLE(OPTION)	1		Y	WHITE
	JK97-01074C	MEA-COVER HOUSING	1		Y	BLACK
	JK97-01074D	MEA-COVER HOUSING: NONE HOLE(OPTION)	1		Y	BLACK
c-1	JK75-00026A	MEA-SUB HOUSING	1		Y	WHITE
	JK75-00026B	MEA-SUB HOUSING: NONE HOLE(OPTION)	1		Y	WHITE
	JK75-00026C	MEA-SUB HOUSING	1		Y	BLACK
	JK75-00026D	MEA-SUB HOUSING: NONE HOLE(OPTION)	1		Y	BLACK
c-2	JK75-10386A	MEC-ROLLER: DRAWER	2		Y	
c-3	JK73-20207A	REX-PAD DRAWER	2		N	

6. Exploded Views and Parts List

6-2 DRAWER (MIDDLE)

d. Ass'y Lock

No.	Code No.	Description / Specification	Q'ty	Design-Location	Serviceable	Remark
d	JK97-00985A	MEA-UNIT LOCK: 2-LATCH, LONG LEVER	1		Y	
	JK97-00987A	MEA-UNIT LOCK: 2-LATCH, SHORT LEVER	1		Y	
d-1	6002-000157	SCREW-TAPPING	1		Y	
d-2	JK73-20210A	REX-BUMPER	1		Y	
d-3	JK70-30017A	SPRING-PUSH	1		Y	
d-4	JK75-00027A	MEC-LOCK LEVER: 2-LATCH, LONG LEVER	1		Y	
	JK75-00027B	MEC-LOCK LEVER: 2-LATCH, SHORT LEVER	1		Y	
d-5	6107-001014	SPRING-ES	1		Y	
d-6	JK33-10500A	SOLENOID-DC	1		Y	
d-7	6001-000131	SCREW-MACHINE	2		Y	
d-8	6001-000525	SCREW-MACHINE	2		Y	
d-9	3405-001013	SWITCH-MICRO	1		Y	
d-10	JK39-40301R	CBF-HARNESS	1		Y	
d-11	6002-000161	SCREW-TAPPING	3		Y	

e. Ass'y Bottom

No.	Code No.	Description / Specification	Q'ty	Design-Location	Serviceable	Remark
e	JK97-01976A	MEA-UNIT BOTTOM	1		Y	
	JK97-01076B	MEA-UNIT BOTTOM: UNIVERSAL	1		Y	
e-1	JK70-10938A	IPR-PLATE BOTTOM	1		Y	
e-2	JK73-40200A	RMO-STOPPER	2		Y	
	JK73-10902A	RMO-STOPPER: UNIVERSAL	2		Y	
e-3	JK61-40200A	RMO-FOOT RUBBER	4		Y	
e-4	6002-000234	SCREW-TAPPING	4		Y	
e-5	6003-000267	SCREW-TAPTITE	6		Y	
e-6	6003-000267	SCREW-TAPTITE	2		Y	
e-7	JK70-10401A	IPR-PLATE SPRING	2		Y	
e-8	6003-000267	SCREW-TAPTITE	4		Y	

6-2 DRAWER (MIDDLE:Aplus)

H. ASS'Y DRAWER(4B8C)

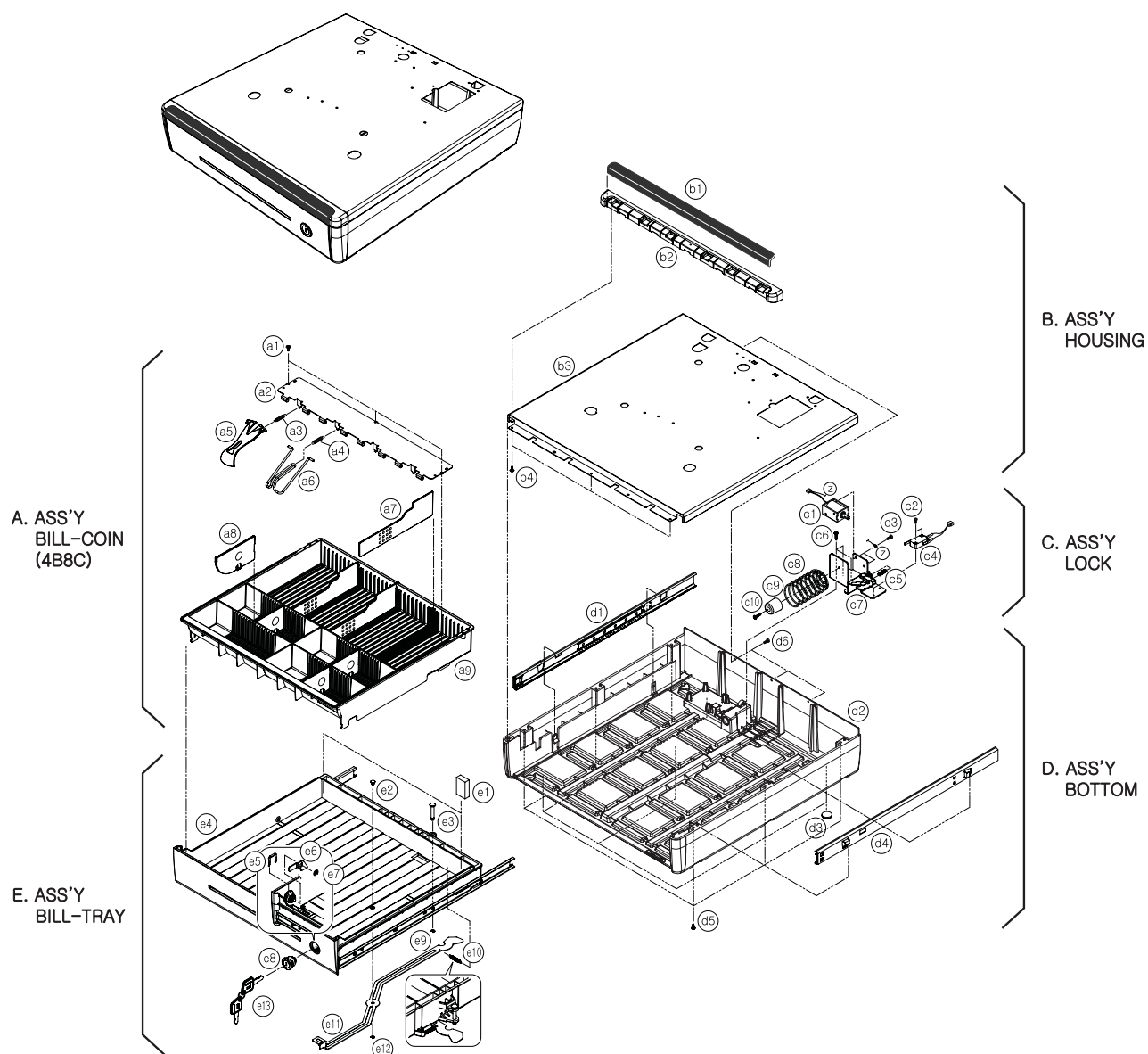


Figure 6-11. ASS'Y DRAWER(4B8C)

6-2 DRAWER (MIDDLE:Aplus)

H. ASS'Y DRAWER(5B5C)

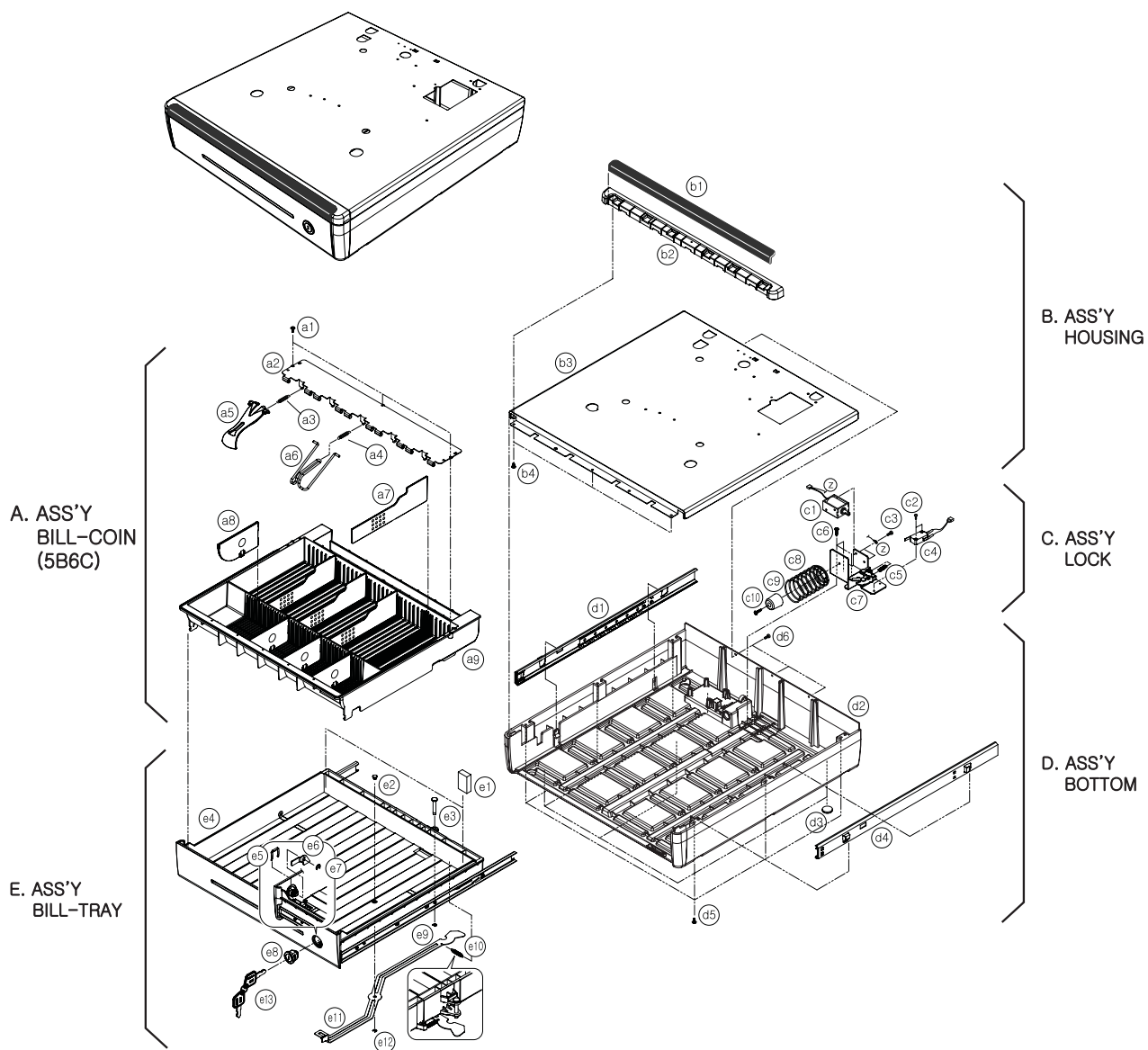


Figure 6-12. ASS'Y DRAWER(5B5C)

6-2 DRAWER (MIDDLE:Aplus)

H. ASS'Y DRAWER

No.	Code No.	Description / Specification	Q'ty	Design-Location	Serviceable	Remark
F	JK75-20039B	MEC-DRAWER:F84YPB-24 (ECR)	1		Y	
	JK75-20039D	MEC-DRAWER:F84YSB-24 (ECR)	1		Y	
	JK75-20040B	MEC-DRAWER:F55YPB-24 (ECR)	1		Y	
	JK75-20040D	MEC-DRAWER:F55YSB-24 (ECR)	1		Y	
	JK75-20055B	MEC-DRAWER:F84NPB-24 (ECR)	1		Y	
	JK75-20055D	MEC-DRAWER:F84NSB-24 (ECR)	1		Y	
	JK75-20056B	MEC-DRAWER:F55NPB-24 (ECR)	1		Y	
	JK75-20056D	MEC-DRAWER:F55NSB-24 (ECR)	1		Y	

a. ASS'Y BILL-COIN

No.	Code No.	Description / Specification	Q'ty	Design-Location	Serviceable	Remark
a	JK97-20068A	MEA-UNIT BILL COIN (4B8C) : PLASTIC	1		Y	
	JK97-20068B	MEA-UNIT BILL COIN (4B8C) : STEEL	1		Y	
	JK97-20069A	MEA-UNIT BILL COIN (5B5C) : PLASTIC	1		Y	
	JK97-20069B	MEA-UNIT BILL COIN (5B5C) : STEEL	1		Y	
a1	JK70-50070A	SCREW-TAPTITE:BLACK	3		Y	
a2	JK70-20068A	IPR-PLATE HOLDER(4B8C)	1		Y	
	JK70-20069A	IPR-PLATE HOLDER(5B5C)	1		Y	
a3	JK70-30014A	SPRING-LEVER PRESS(MD)	4(5)		Y	
a4	JK70-30015A	SPRING-LEVER PRESS(PD)	4(5)		Y	OPTION
a5	JK72-20259A	PMO-LEVER PRESS	4(5)		Y	
a6	JK70-20067A	IPR-LEVER PRESS	4(5)		Y	OPTION
a7	JK72-20252A	PMO-BILL PARTITION	3		Y	
a8	JK72-20253A	PMO-COIN PARTITION(4B8C)	4		Y	
	JK72-20254A	PMO-COIN PARTITION(5B5C)	5		Y	SPARE 1EA
a9	JK72-20250A	PMO-BILL COIN TILL(4B8C)	1		Y	
	JK72-20251A	PMO-BILL COIN TILL(5B5C)	1		Y	

b. ASS'Y HOUSING

No.	Code No.	Description / Specification	Q'ty	Design-Location	Serviceable	Remark
b	JK97-20062A	MEA-UNIT HOUSING : STD	1		Y	WHITE
	JK97-20062B	MEA-UNIT HOUSING : STD	1		Y	BLACK
	JK97-20062C	MEA-UNIT HOUSING : SER	1		Y	WHTIE
	JK97-20062D	MEA-UNIT HOUSING : SER	1		Y	BLACK
	JK97-20062E	MEA-UNIT HOUSING : IMPER	1		Y	WHTIE
	JK97-20062F	MEA-UNIT HOUSING : IMPER	1		Y	BLACK
b1	JK72-20256A	PMO-COVER DECO	1		Y	
b2	JK72-20257A	PMO-COVER FRONT	1		Y	WHITE
	JK72-20257B	PMO-COVER FRONT	1		Y	BLACK
b3	JK70-20062A	IPR-HOUSING DRAWER : STD	1		Y	WHITE
	JK70-20062B	IPR-HOUSING DRAWER : STD	1		Y	BLACK
	JK70-20062C	IPR-HOUSING DRAWER : SER	1		Y	WHITE
	JK70-20062D	IPR-HOUSING DRAWER : SER	1		Y	BLACK
	JK70-20062E	IPR-HOUSING DRAWER : IMPER	1		Y	WHITE
	JK70-20062F	IPR-HOUSING DRAWER : IMPER	1		Y	BLACK
b4	JK70-50070A	SCREW-TAPTITE : BLACK	3		Y	

6. Exploded Views and Parts List

6-2 DRAWER (MIDDLE:Aplus)

c. ASS'Y LOCK

No.	Code No.	Description / Specification	Q`ty	Design-Location	Serviceable	Remark
c	JK97-00983A	MEA-UNIT LOCK : 24V	1		Y	
	JK97-00983B	MEA-UNIT LOCK : 12V	1		Y	
c1	JK33-10500A	SOLENOID-DC,24V	1		Y	
	JK33-10500D	SOLENOID-DC,12V	1		Y	
c2	6001-000525	SCREW-MACHINE : PH,M3,L14	2		Y	
c3	6001-000131	SCREW-MACHINE : BH,M3,L6	2		Y	
c4	3405-001013	SWITCH-MICRO	1		Y	
c5	6107-001041	SPRING-LOCK LEVER	1		Y	
c6	6002-000201	SCREW-TAPPING(RH) : M4,L12	3		Y	
c7	JK75-00027B	MEC-LOCK LEVER : 2-LATCH,SHORT LEVER	1		Y	
c8	JK70-30017A	SPRING-PUSH : DRAWER,FZN	1		Y	
c9	JK73-20210A	REX-BUMPER : DRAWER,NR,BLK	1		Y	
c10	6002-000157	SCREW-TAPPING : PH,M4,L14	1		Y	

d. ASS'Y BOTTOM

No.	Code No.	Description / Specification	Q`ty	Design-Location	Serviceable	Remark
d	JK97-20063A	MEA-UNIT BOTTOM (4B8C)	1		N	WHITE
	JK97-20063B	MEA-UNIT BOTTOM (4B8C)	1		N	BLACK
	JK97-20064A	MEA-UNIT BOTTOM (5B5C)	1		N	WHITE
	JK97-20064B	MEA-UNIT BOTTOM (5B5C)	1		N	BLACK
d1	JK81-20063A	AS-RAIL OUTER LH	1		Y	4B8C
	JK81-20063B	AS-RAIL OUTER LH	1		Y	5B5C
d2	JK72-20255A	PMO-COVER BOTTOM	1		Y	WHITE
	JK72-20255B	PMO-COVER BOTTOM	1		Y	BLACK
d3	JK61-40201A	FOOT	5		Y	
d4	JK81-20064A	AS-RAIL OUTER RH	1		Y	4B8C
	JK81-20064B	AS-RAIL OUTER RH	1		Y	5B5C
d5	6003-000267	SCREW-TAPTITE : PWH,M3,L8	6		Y	
d6	JK70-50073A	SCREW-DELTA PT:BH,M3,L8,PI5.5	3		Y	WHITE
	JK70-50073B	SCREW-DELTA PT:BH,M3,L8,PI5.5	3		Y	BLACK

6-2 DRAWER (MIDDLE:Aplus)

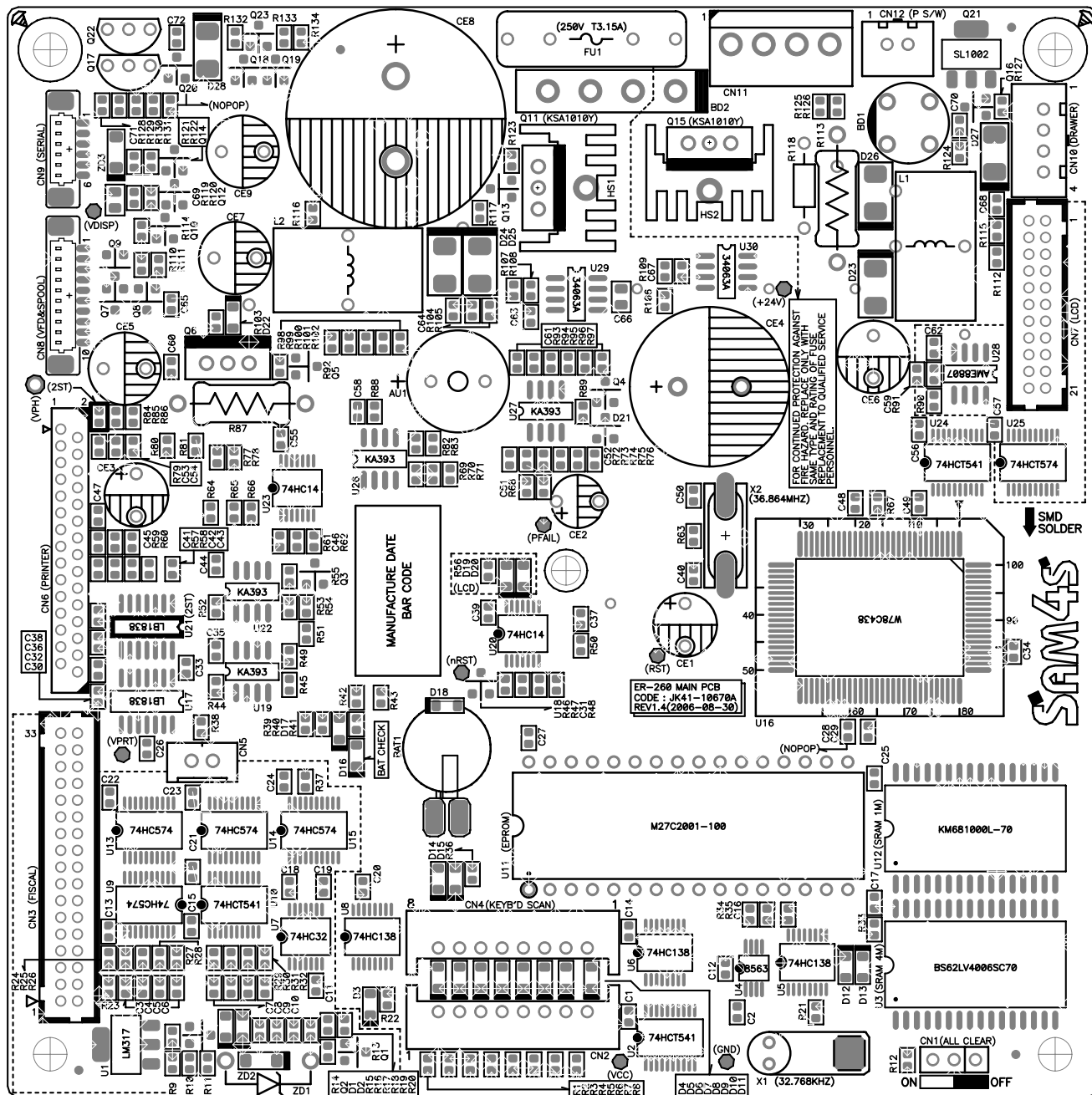
e. ASS'Y BILL TRAY

No.	Code No.	Description / Specification	Q'ty	Design-Location	Serviceable	Remark
e	JK97-20065A	MEA-UNIT TRAY (4B8C)	1		Y	WHITE
	JK97-20065B	MEA-UNIT TRAY (4B8C)	1		Y	BLACK
	JK97-20066A	MEA-UNIT TRAY (5B5C)	1		Y	WHITE
	JK97-20066B	MEA-UNIT TRAY (5B5C)	1		Y	BLACK
e1	JK74-40902A	RPR-TENSION	2		Y	
e2	JK70-70037A	ICT-SHAFT PUSH LEVER	1		Y	
e3	JK70-40302A	ICT-SHAFT PIN	1		Y	
e4	JK97-20059A	MEA-FRAME TRAY (4B8C)	1		Y	WHITE
	JK97-20059B	MEA-FRAME TRAY (5B5C)	1		Y	WHITE
	JK97-20059C	MEA-FRAME TRAY (4B8C)	1		Y	BLACK
	JK97-20059D	MEA-FRAME TRAY (5B5C)	1		Y	BLACK
e5	JK70-10323A	IPR-PLATE CLIP	1		Y	
e6	JK70-20074A	IPR-LEVER LOCK	1		Y	
e7	6044-000231	RING-E : ID 5	1		Y	
e8	Jk75-20041A	MEC-LOCK : KEY NO.2424	1		Y	
	Jk75-20041B	MEC-LOCK : KEY NO.2442	1		Y	
	Jk75-20041C	MEC-LOCK : KEY NO.3353	1		Y	
	Jk75-20041D	MEC-LOCK : KEY NO.3355	1		Y	
	Jk75-20041E	MEC-LOCK : KEY NO.4224	1		Y	
	Jk75-20041F	MEC-LOCK : KEY NO.4242	1		Y	
	Jk75-20041G	MEC-LOCK : KEY NO.5355	1		Y	
	Jk75-20041H	MEC-LOCK : KEY NO.5535	1		Y	
e9	6044-000124	RING-E : ID 3	1		Y	
e10	JK70-30016A	SPRING-PUSH LEVER	1		Y	
e11	JK70-20070A	IPR-PUSH LEVER	1		Y	
e12	6044-000125	RING-E : ID 4	1		Y	
e13	JK70-20075A	IPR-KEY DRAWER : KEY NO.2424	1SET		Y	2EA
	JK70-20075B	IPR-KEY DRAWER : KEY NO.2442	1SET		Y	2EA
	JK70-20075C	IPR-KEY DRAWER : KEY NO.3353	1SET		Y	2EA
	JK70-20075D	IPR-KEY DRAWER : KEY NO.3355	1SET		Y	2EA
	JK70-20075E	IPR-KEY DRAWER : KEY NO.4224	1SET		Y	2EA
	JK70-20075F	IPR-KEY DRAWER : KEY NO.4242	1SET		Y	2EA
	JK70-20075G	IPR-KEY DRAWER : KEY NO.5355	1SET		Y	2EA
	JK70-20075H	IPR-KEY DRAWER : KEY NO.5535	1SET		Y	2EA

MEMO

7 PCB Layout and Parts List

7-1 Main PCB



7. PCB Layout and Parts List

7-1 Main PCB

No	Part-No	Description / Specification	Q'TY	Design-location	Serviceable	Remark
-	JK92-01472ALF	PBA MAIN-BOARD:ER-260M,LCD,2STA,5MBIT	1	ASS'Y	Y	
	JK92-01472BLF	PBA MAIN-BOARD:ER-260,VFD,1STA,1MBIT				
	JK92-01472CLF	PBA MAIN-BOARD:ER-260MF,LCD,2STA,FISCAL				
	JK92-01472DLF	PBA MAIN-BOARD:ER-260M,LCD,1STA,STD				
	JK92-01472ELF	PBA MAIN-BOARD:ER-260,VFD,1STA,5MBIT				
	JK92-01472FLF	PBA MAIN-BOARD:ER-260M,LCD,1STA,1MBIT				
	JK92-01472GLF	PBA MAIN-BOARD:ER-260,VFD,1STA,CRS,1MBIT				
	JK92-01472HLF	PBA MAIN-BOARD:ER-260F,VFD,2STA,FISCAL				
	JK92-01472KLF	PBA MAIN-BOARD:ER-260,VFD,2STA,1MBIT				
-	0402-000119	DIODE-BRIDGE:W02G,200V,1.5A,-,-	1	BD1	Y	
-	0402-000290	DIODE-BRIDGE:KBU6B,100V,6A,-,BK	1	BD2	Y	
-	0403-000141	DIODE-ZENER:1N4735A,6.2V,5%,1W,DO-41,TP	1	ZD1	Y	
-	0501-000294	TR-SMALL SIGNAL:KSA708Y,PNP,800mW,TO-92	2	Q17,Q22	Y	
-	0502-000234	TR-POWER:KSA1010Y,PNP,40W,TO-220,100-200	3	Q6,Q11,Q15	Y	
-	1102-000137	IC-EPROM:27C2001,256Kx8BIT,DIP,32P,100ns	1	U11	Y	
-	2001-000119	R-CARBON:680OHM,5%,1/4W,AA,TP,2.4X6.0MM	1	R118	N	
-	2003-000502	R-METAL OXIDE(S):150Ω,5%,2W,TC,3.8*10.6	1	R87	N	
-	2005-001001	R-WIRE WOUND:0.1ohm,5%,1W,WRIT1W0.1Ω-J	1	R113	N	
-	2401-000032	C-AL:100uF,50V,RADIAL,φ8*11.5L,RoHS	1	CE9	Y	
-	2401-000042	C-AL:100uF,16V,RADIAL,φ6.3*7L,RoHS	2	CE1,CE3	Y	
-	2401-000480	C-AL:10uF,20%,50V,GP,TP,5x11,5	1	CE2	Y	
-	2401-001313	C-AL:4700uF,20%,50V,LUG,φ25.4*30L,RoHS,	1	CE8	Y	
-	2401-001363	C-AL:470uF,20%,16V,GP,TP,10x12.5,5	2	CE5,CE6	Y	
-	2401-001363	C-AL:470uF,20%,16V,GP,TP,10x12.5,5	1	CE7	Y	
-	2401-002621	C-AL:2200uF,20%,50V,RADIAL,φ18*25L,RoHS	1	CE4	Y	
-	2801-003376	CRYSTAL-UNIT:32.768KHz,20ppm,28-AAY,12	1	X1	Y	
-	3002-001027	BUZZER-PIEZO:85dB,1.5V,24mA,2.048KHz,BK	1	AU1	Y	
-	3601-000261	FUSE-CARTRIDGE:250V,3.15A,TIME-LAG,GLASS	1	FU1	Y	
-	3602-000001	FUSE-CLIP:-,30mohm	2	FU1	Y	
-	3704-000255	SOCKET-IC:32P,DIP,SN,2.54mm	1	U11	Y	
-	3708-000327	CONNECTOR-FFC:8P,1R,2.54mm,ST,BLACK	2	CN2,CN4	Y	

7-1 Main PCB

No	Part-No	Description / Specification	Q'TY	Design-location	Serviceable	Remark
-	3708-001395	CONNECTOR-FPC/FFC/PIC:30P,1mm,ST,DIP,TOP	1	CN6	Y	
-	3710-000111	CONNECTOR-SHUNT:2P,1R,2.54mm,JMHHA01,	1	CN1	Y	
-	3711-000242	CONNECTOR-HEADER:1WALL,4P,1R,3.96mm,ST	1	CN11	Y	
-	3711-000841	CONNECTOR-HEADER:BOX,34P,2R,2MM,ST	1	CN3	Y	
-	3711-001475	CONNECTOR-HEADER:NOWALL,3P,1R,2.54mm,ST	1	CN1	Y	
-	3711-002002	CONNECTOR-HEADER:BOX,22P,2R,2mm,ST,BLK	1	CN7	Y	
-	3711-004100	WAFER;BOX-HEADER,1R,2P,2.5mm,ST,WHITE,	1	CN12	Y	
-	3711-004105	WAFER;BOX-HEADER,1R,4P,2.5mm,ST,WHITE,	1	CN10	Y	
-	4301-000121	BATTERY:3.0V,11mAh,MS920S-FL27E	1	BAT1	Y	
-	6002-000175	SCREW-TAPPING:PWH,+,2,M3,L8,ZPC(YEL)	2	KSA1010Y+HS1, KSA1010Y+HS2	N	
-	6203-000108	HEAT SINK:NONE,T3,W10.5,L15,H30,AL,YS100	2	HS1,HS2	Y	
-	JC68-10564A	LABEL(P)-PROTECTOR:SLB-3108H,ART,-,100(S	1	EPROM	N	
-	JK27-60100D	COIL-FILTER:140uH,0.2Ω,8.5*17*17,TR15Φ	2	L1,L2	Y	
-	JK39-40541A	CBF HARNESS-GND:ER-5100II,UL1015#18,260	1	GND WIRE	Y	
-	0401-001003	DIODE-SWITCHING:MMD6050LT1,70V,200mA,22	1	D21	Y	
-	0402-001189	DIODE-RECTIFIER:M4,400V,1A,SMD-2,TP	2	D27,D28	Y	
-	0403-000754	DIODE-ZENER:BZT52C30,30V,500mW,SOD-123	1	ZD3	Y	
-	0404-001051	DIODE-SCHOTTKY:SK14,40V,1A,DO-214AA,	4	D23~D26	Y	
-	0404-001052	DIODE-SCHOTTKY:BAT43WS,SOD-323	21	D1~D20,D22	Y	
-	0501-000279	TR-SMALL SIGNAL:KSA1182Y,PNP,150mW,SOT23	7	Q2,Q7,Q8,Q12,Q13,Q18, Q19	Y	
-	0501-000457	TR-SMALL SIGNAL:MMBT2222A,NPN,350MW,SOT-	9	Q1,Q3~Q5,Q9,Q10,Q14, Q16,Q23	Y	
-	0502-000400	TR-POWER:SL1002,NPN,3A,10W,SOT-23	1	Q21	Y	
-	0801-001116	IC-CMOS LOGIC:74HC14,INVERTER,TSSOP,14P	2	U20,U23	Y	
-	0801-001117	IC-CMOS LOGIC:74HC138,DECODER,TSSOP	3	U5,U6,U8	Y	
-	0801-001118	IC-CMOS LOGIC:74HCT541,BUFFER,TSSOP	3	U2,U10,U24	Y	
-	0801-001119	IC-CMOS LOGIC:74HCT574,D-F/F,TSSOP	5	U9,U13~U15,U25	Y	
-	0801-001120	IC-CMOS LOGIC:74HC32,OR GATE,TSSOP	1	U7	Y	
-	0903-001166	IC-CPU;W78C438CF,PQFP,100P	1	U16	Y	
-	0909-000138	IC-REAL TIME CLOCK:PCF8563,I2C,TSSOP,8P	1	U4	Y	
-	1003-001234	IC-MOTOR DRIVER:LB1838M,SOP,14P,225MIL,	2	U17,U21	Y	
-	1106-000131	IC-SRAM:681000,128Kx8BIT,SOP,32P,1.27mm	1	U12	Y	

7. PCB Layout and Parts List

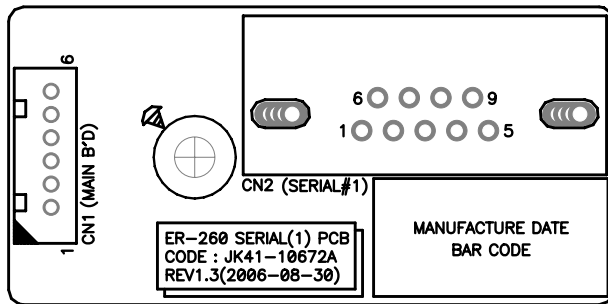
7-1 Main PCB

No	Part-No	Description / Specification	Q'TY	Design-location	Serviceable	Remark
-	1106-000246	IC-SRAM:BS62LV4006,512Kx8BIT,SOP,32P,4M	1	U3	Y	
-	1202-000164	IC-VOLTAGE COMPARATOR:KA393,SOP,8P,1.27m	4	U19,U22,U26,U27	Y	
-	1203-000393	IC-REGUALTOR:LM317(ADJ),SOT-223,3P	1	U1	Y	
-	1203-000404	IC-DC/DC CONVERTER:34063,SOP,8P,150MIL,P	2	U29,U30	Y	
-	1203-000501	IC-RESET:AME8500CEETBE42,SOT-23,3P,5V	1	U18	Y	
-	1203-001765	IC-REGULATOR:AME8807AEHA,SOP,8P	1	U28	Y	
-	2008-000008	R-CHIP:100OHM,5%,1/10W,1608	3	R36,R96,R97	N	
-	2008-000013	R-CHIP:220OHM,5%,1/10W,1608	3	R14,R58,R84	N	
-	2008-000020	R-CHIP:470OHM,5%,1/10W,1608	10	R10,R15~R18,R39,R56, R111,R123,R125	N	
-	2008-000026	R-CHIP:1KOHM,5%,1/10W,1608	14	R19,R22,R33,R34,R35, R40,R99,R100,R101,R103, R122,R130,R133,R134	N	
-	2008-000030	R-CHIP:2KOHM,5%,1/10W,1608	4	R9,R13,R74,R121	N	
-	2008-000037	R-CHIP:4.7KOHM,5%,1/10W,1608	52	R1~R8,R20,R23~R32,R37, R38,R42~R44,R46,R51, R52,R55,R63,R67~R69, R72,R73,R88,R89, R92~R95,R98,R102,R105, R110,R112,R114~R117, R127,R129,R132	N	
-	2008-000041	R-CHIP:6.8KOHM,5%,1/10W,1608	2	R49,R70	N	
-	2008-000044	R-CHIP:10KOHM,5%,1/10W,1608	18	R11,R12,R45,R47,R48, R50,R65~R78,R80,R81, R83,R107,R108,R120, R124,R128	N	
-	2008-000045	R-CHIP:12KOHM,1%,1/10W,1608,1%	4	R53,R71,R82,R109	N	
-	2008-000046	R-CHIP:15KOHM,5%,1/10W,1608	4	R60,R75,R85,R90	N	
-	2008-000047	R-CHIP:18KOHM,5%,1/10W,1608	3	R41,R61,R104	N	
-	2008-000051	R-CHIP:27KOHM,5%,1/10W,1608	3	R76,R119,R126	N	
-	2008-000054	R-CHIP:36KOHM,1%,1/10W,1608,1%	4	R54,R62,R91,R106	N	
-	2008-000063	R-CHIP:100KOHM,5%,1/10W,1608	2	R57,R79	N	
-	2008-000065	R-CHIP:150KOHM,5%,1/10W,1608	4	R21,R59,R64,R86	N	
-	2203-000192	C-CERAMIC,CHIP:100nF,+80-20%,50V,Y5V,TP,	2	C66,C69	N	
-	2204-000001	C-CERAMIC,CHIP:5pF,5%,50V,1608	2	C40,C50	N	
-	2204-000003	C-CERAMIC,CHIP:15pF,5%,50V,1608	1	C2	N	
-	2204-000010	C-CERAMIC,CHIP:100pF,5%,50V,1608	19	C3~C11,C13,C19,C30, C32,C36,C38,C59,C63, C67,C72	N	
-	2204-000023	C-CERAMIC,CHIP:10nF,10%,50V,X7R,1608	1	C46	N	

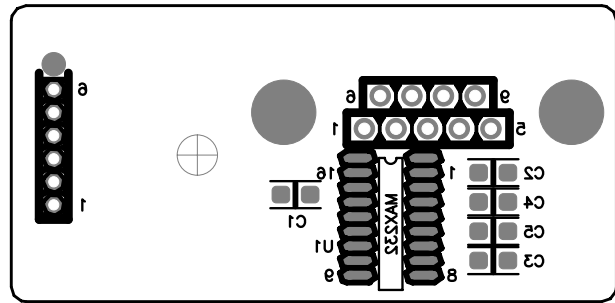
7-1 Main PCB

No	Part-No	Description / Specification	Q'TY	Design-location	Serviceable	Remark
-	2204-000028	C-CERAMIC,CHIP:100nF,+80-20%,25V,Y5V,160	42	C1,C12,C14~C18,C20~C27,C29,C33~C35,C39,C41~C45,C47~C49,C51,C53~C58,C60,C61,C64,C65,C68,C70,C71	N	
-	2204-000029	C-CERAMIC,CHIP:1uF,+80-20%,16V,Y5V,1608	4	C31,C37,C52,C62	N	
	2801-003391	CRYSTAL-UNIT:36.864MHZ,SX-1	1	X2	Y	
	3711-004121	WAFER;BOX-HEADER,1R, 6P,1.25mm,SMD,	1	CN9	Y	
-	3711-004125	WAFER;BOX-HEADER,1R, 10P,1.25mm,SMD,	1	CN8	Y	
-	JK41-10670A	PCB-MAIN:ER-260,FR-4,2L,T1.6,130*130mm	1	PCB	N	

7-2 Serial PCB



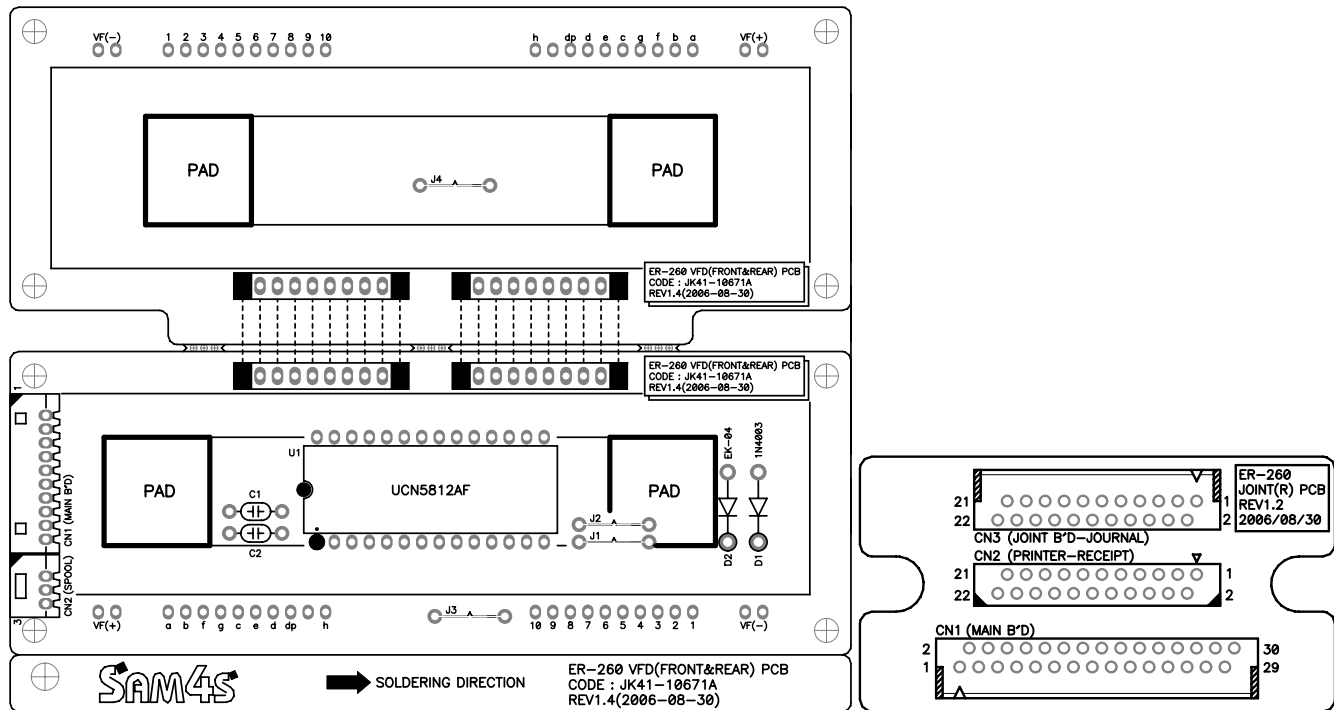
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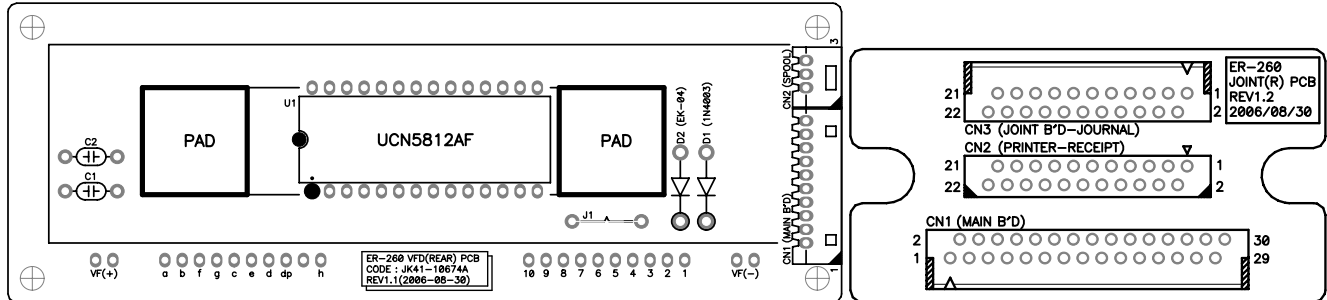
No	Part-No	Description / Specification	Q'TY	Design-location	Serviceable	Remark
-	JK92-01473ALF	PBA I/F:ER-260,232*1,STD	1	ASS'Y	Y	
-	3701-000232	CONNECTOR-DSUB:9P,2R,FEMALE,ANGLE,AUF	1	CN2	Y	
-	3711-003422	CONNECTOR-HEADER:BOX,6P,1R,2mm,ST,DIP	1	CN1	Y	
-	JK39-40687A	HARNESS-I/F:ER-260,232*1,6P	1	I/F HARNESS	Y	
-	1006-000133	IC-DRIVER/RECEIVER:232,SOIC,16P,1.27mm	1	U1	Y	
-	2203-000990	C-CERAMIC,CHIP:1uF,+80-20%,25V,Y5V,TP,20	5	C1~C5	N	
-	JK41-10672A	PCB-I/F:ER-260,232*1,FR-1,1L,T1.6,52.5*2	1	PCB	N	

7-3 Front & Rear Display PCB & Joint(R) PCB



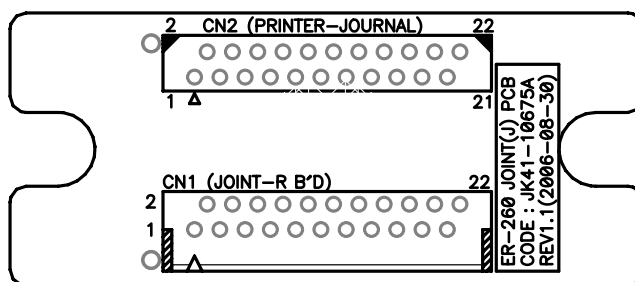
No	Part-No	Description / Specification	Q'TY	Design-location	Serviceable	Remark
-	JK92-01476DLF	PBA DISPLAY:ER-260,FRONT&REAR,2 STATION	1	ASS'Y	Y	
-	1003-001381	IC-VFD:HV5812P,DIP,28P,540MIL,-,-,ST,PLA	1	U1	Y	
-	3708-001394	CONNECTOR-FPC/FFC/PIC:22P,1mm,ST,DIP,TOP	1	CN2 (JOINT B'D)	Y	
-	3708-001396	CONNECTOR-FPC/FFC/PIC:22P,1mmAN,DIP,SIDE	1	CN3 (JOINT B'D)	Y	
-	3708-001397	CONNECTOR-FPC/FFC/PIC:30P,1mmAN,DIP,SIDE	1	CN1 (JOINT B'D)	Y	
-	3711-003408	CONNECTOR-HEADER:BOX,3P,1R,2mm,ANGLE	1	CN2	Y	
-	3711-003429	CONNECTOR-HEADER:BOX,10P,1R,2mm,AN,DIP	1	CN1	Y	
-	JK07-00005A	DISPLAY VFD-DC10G:FUTABA,10-LT-50GK	2	V1,V2 (FUTABA VFD)	Y	
-	JK39-40684A	HARNESS-JUMP WIRE:ER-260,DISPLAY,10P	2	HARNESS	Y	
-	JK73-10207A	RPR-PAD(15X15,T5):SPONGE,BLACK	4	PCB+VFD	Y	
-	JK39-40685A	HARNESS-DISPLAY:ER-260,10P	1	DISPLAY HARNESS	Y	
-	0402-000129	DIODE-RECTIFIER:1N4003,200V,1A,DO-41,TP	1	D1	Y	
-	0402-000208	DIODE-RECTIFIER:EK-04,40V,1.5A,DO-41	1	D2	Y	
-	2202-000630	C-CERAMIC,MLC-AXIAL:100nF,10%,50V,X7R,TP	2	C1,C2	N	
-	JC39-40511A	CBF HARNESS:ML-80,JUMPER,AWG22,52mm,SILV	4	J1~J4	Y	
-	JK41-10671A	PCB-VFD:ER-260,FR-1,1L,T1.6,172.3*102.3m	1	PCB	N	

7-4 Rear Display PCB & Joint(R) PCB



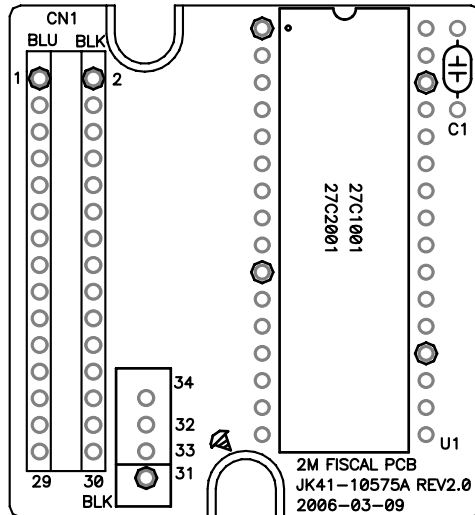
No	Part-No	Description / Specification	Q'TY	Design-location	Serviceable	Remark
-	JK92-01476BLF	PBA DISPLAY:ER-265M,REAR ONLY,2 STATION	1	ASS'Y	Y	
-	1003-001381	IC-VFD:HV5812P,DIP,28P,540MIL,-,-,ST,PLA	1	U1	Y	
-	3708-001394	CONNECTOR-FPC/FFC/PIC:22P,1mm,ST,DIP,TOP	1	CN2 (JOINT B'D)	Y	
-	3708-001396	CONNECTOR-FPC/FFC/PIC:22P,1mmAN,DIP,SIDE	1	CN3 (JOINT B'D)	Y	
-	3708-001397	CONNECTOR-FPC/FFC/PIC:30P,1mmAN,DIP,SIDE	1	CN1 (JOINT B'D)	Y	
-	3711-003408	CONNECTOR-HEADER:BOX,3P,1R,2mm,ANGLE	1	CN2	Y	
-	3711-003429	CONNECTOR-HEADER:BOX,10P,1R,2mm,AN,DIP	1	CN1	Y	
-	JK07-00005A	DISPLAY VFD-DC10G:FUTABA,10-LT-50GK	1	V1 (FUTABA VFD)	Y	
-	JK73-10207A	RPR-PAD(15X15,T5):SPONGE,BLACK	2	PCB+VFD	Y	
-	JK39-40685A	HARNESS-DISPLAY:ER-260,10P	1	DISPLAY HARNESS	Y	
-	0402-000129	DIODE-RECTIFIER:1N4003,200V,1A,DO-41,TP	1	D1	Y	
-	0402-000208	DIODE-RECTIFIER:EK-04,40V,1.5A,DO-41	1	D2	Y	
-	2202-000630	C-CERAMIC,MLC-AXIAL:100nF,10%,50V,X7R,TP	2	C1, C2	N	
-	JC39-40511A	CBF HARNESS:ML-80,JUMPER,AWG22,52mm,SILV	1	J1	Y	
-	JK41-10674A	PCB-VFD REAR:ER-260M,FR-1,1L,T1.6,RoHS	1	PCB	N	

7-5 Joint(J) PCB



No	Part-No	Description / Specification	Q'TY	Design-location	Serviceable	Remark
-	JK92-01475ALF	PBA JOINT(J):ER-265,STD	1	ASS'Y	Y	
-	3708-001396	CONNECTOR-FPC/FFC/PIC:22P,1mmAN,DIP,SIDE	1	CN1	Y	
-	3708-001394	CONNECTOR-FPC/FFC/PIC:22P,1mm,ST,DIP,TOP	1	CN2	Y	
-	JK41-10675A	PCB-JOINT(J):ER-260,FR-4,2L,T1.6mm	1	PCB	N	

7-6 Fiscal PCB



7-6-1 FISCAL 1MBIT - EPROM (27C1001)

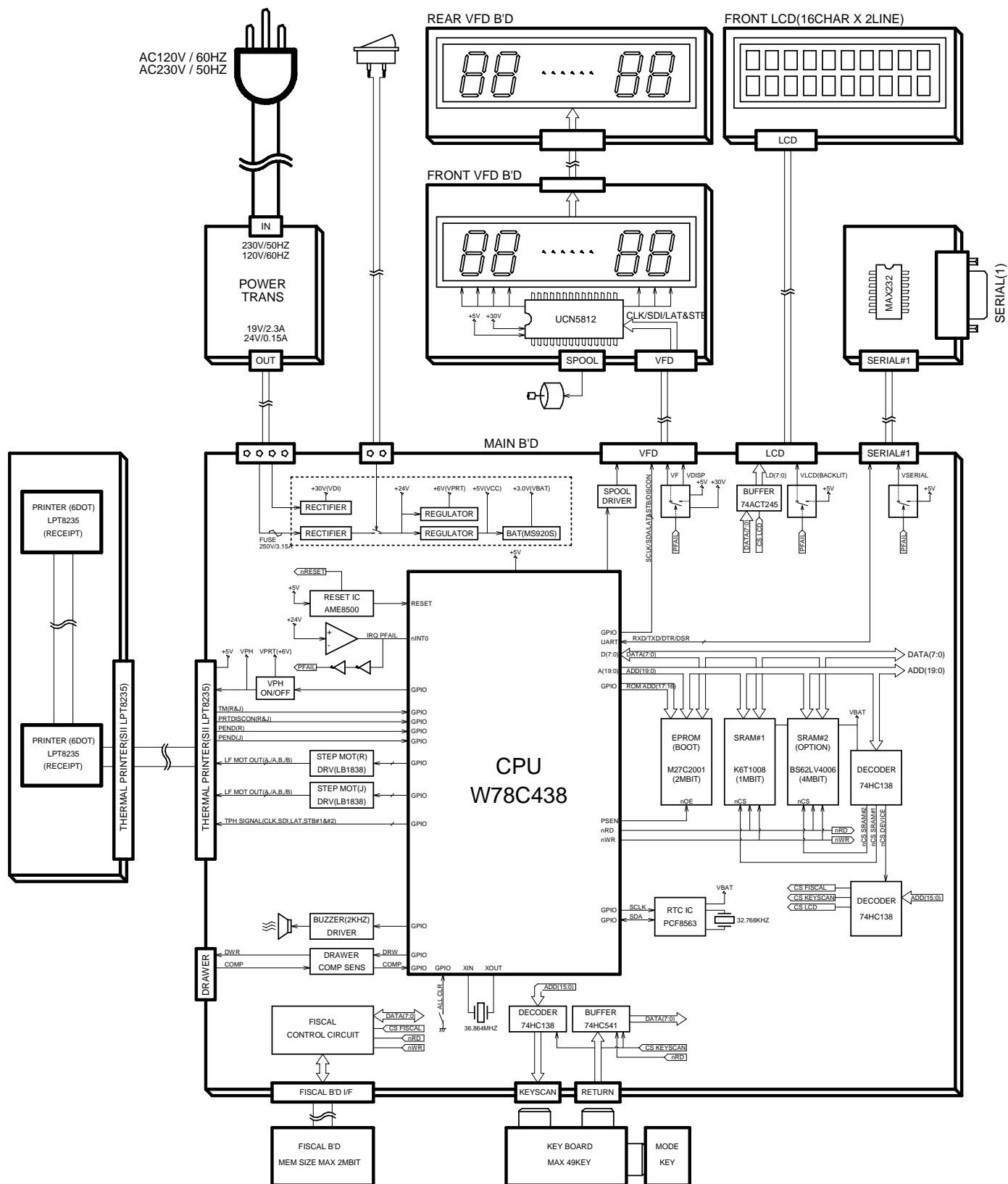
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-	JK92-01284CLF	PBA SUB-FISCAL:ER-350II,1MBIT,34P	1	ASS'Y	Y	
-	1102-000110	IC-EPROM:27C1001,128Kx8BIT,DIP,32P,100ns	1	U1	Y	
-	2202-000630	C-CERAMIC,MLC-AXIAL:100nF,10%,50V,X7R,TP	1	C1	N	
-	JK39-00009B	CBF-HARNESS-FISCAL 2M:ER-420F,SER,34P	1		Y	
-	JK41-10575A	PCB-FISCAL:2M,FR-4,2L,T1.6mm,164*132mm,	1	FISCAL PCB	N	

7-6-1 FISCAL 2MBIT - EPROM (27C2001)

No	Part-No	Description / Specification	Q'TY	Design-location	Serviceable	Remark
-	JK92-01284DLF	PBA SUB-FISCAL:ER-350II,2MBIT,34P	1	ASS'Y	Y	
-	1102-000137	IC-EPROM:27C2001,256Kx8BIT,DIP,32P,100ns	1	U1	Y	
-	2202-000630	C-CERAMIC,MLC-AXIAL:100nF,10%,50V,X7R,TP	1	C1	N	
-	JK39-00009B	CBF-HARNESS-FISCAL 2M:ER-420F,SER,34P	1		Y	
-	JK41-10575A	PCB-FISCAL:2M,FR-4,2L,T1.6mm,164*132mm,	1	FISCAL PCB	N	

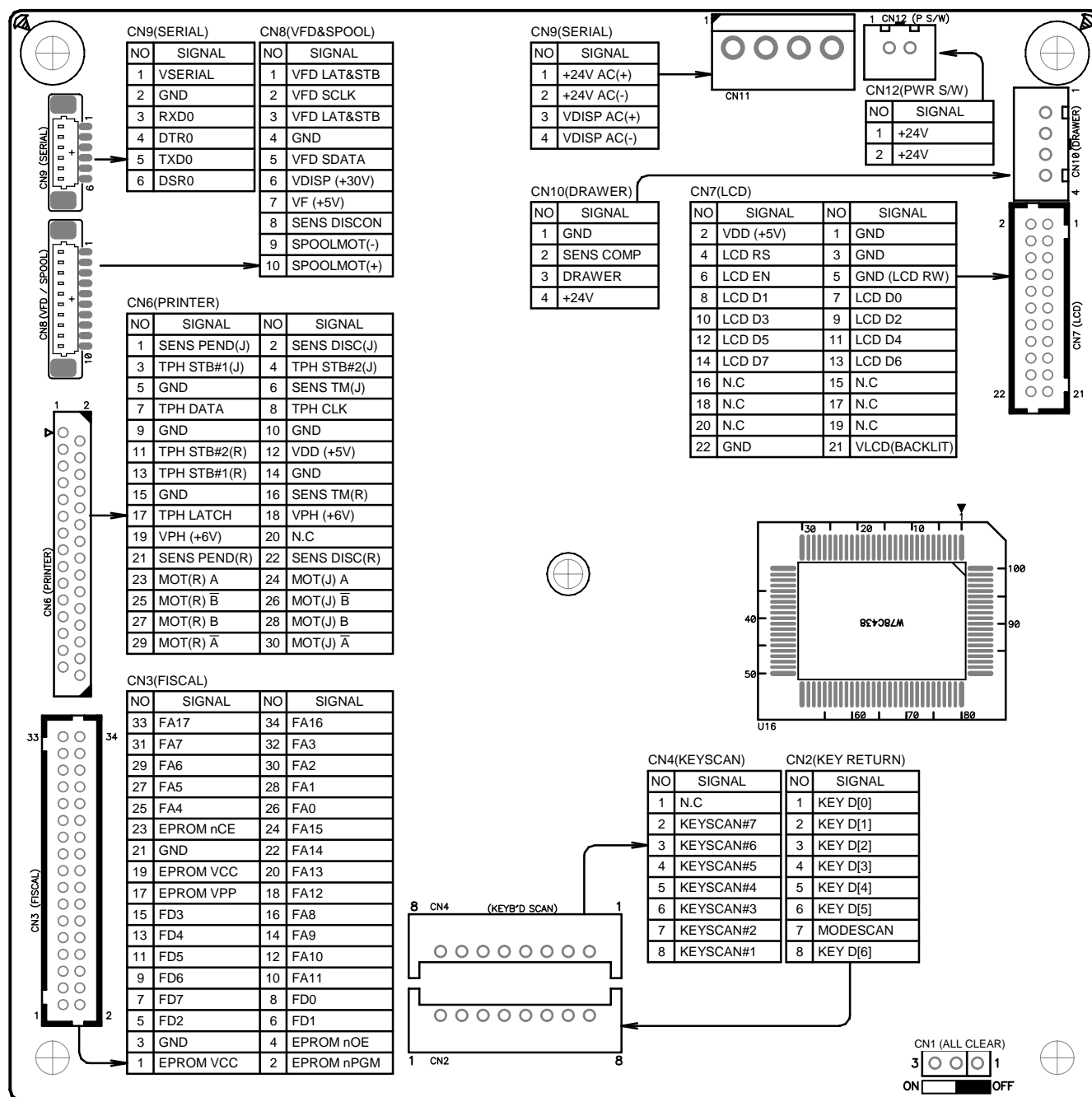
MEMO

8 Block Diagram



MEMO

9 Wiring Diagram



MEMO

10 Schematic Diagram

[Schematics Sheet Content]

1. Main PCB Schematics.

1) CPU Block	Page 10-2
2) Memory Block	Page 10-3
3) Key & Serial Block	Page 10-4
4) PFAIL & RTC& DRW & RTC Block	Page 10-5
5) VFD & LCD Display Block	Page 10-6
6) Motor & Spool Block	Page 10-7
7) Printer TPH & Sensor Block	Page 10-8
8) Fiscal Logic Block	Page 10-9
9) Fiscal Drive Block	Page 10-10
10) Power Block	Page 10-11

2. Display PCB Schematics.

1) VFD Front & Rear	Page 10-12
2) VFD Rear	Page 10-13

3. Serial I/F PCB Schematics.

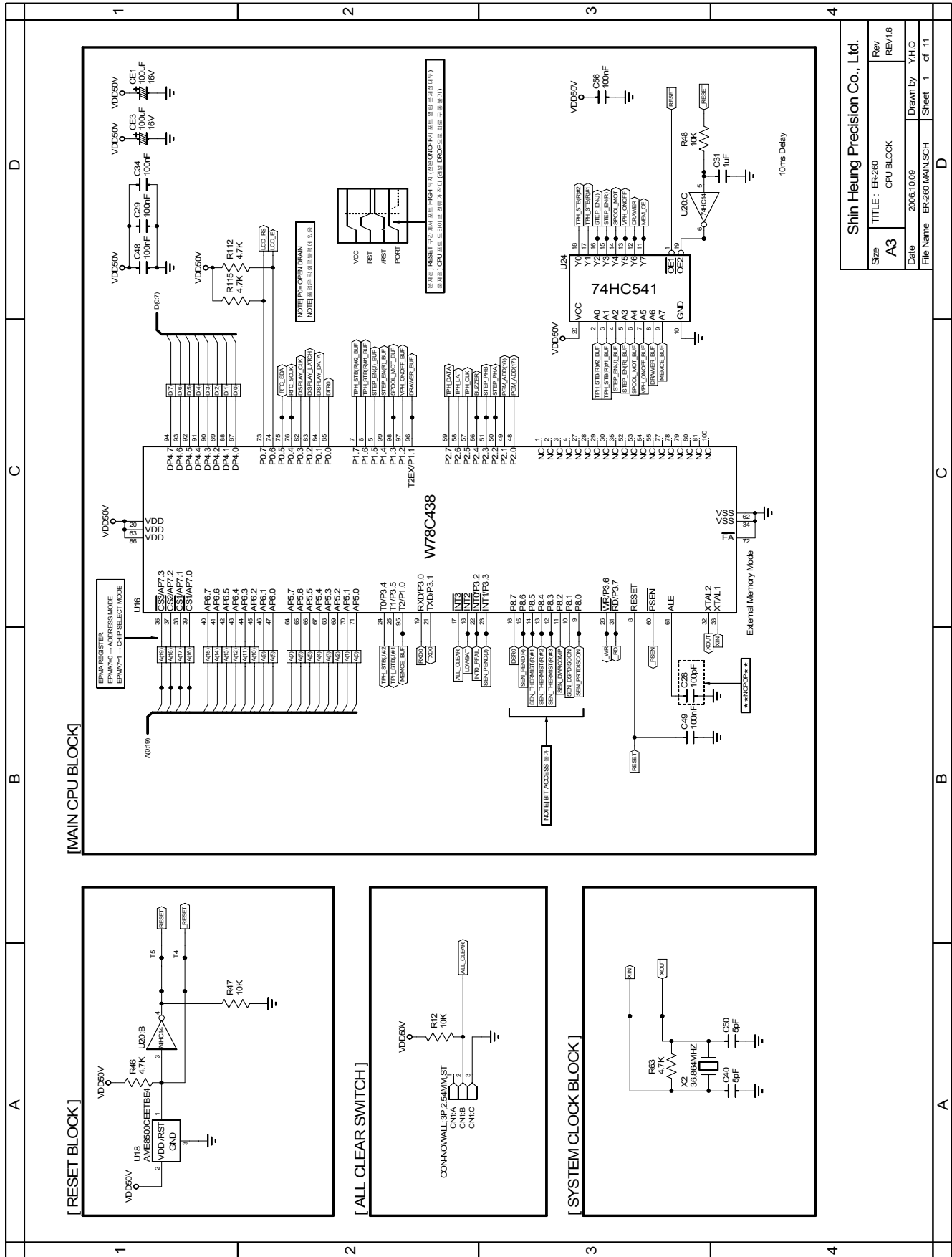
1) Serial 1port	Page 10-14
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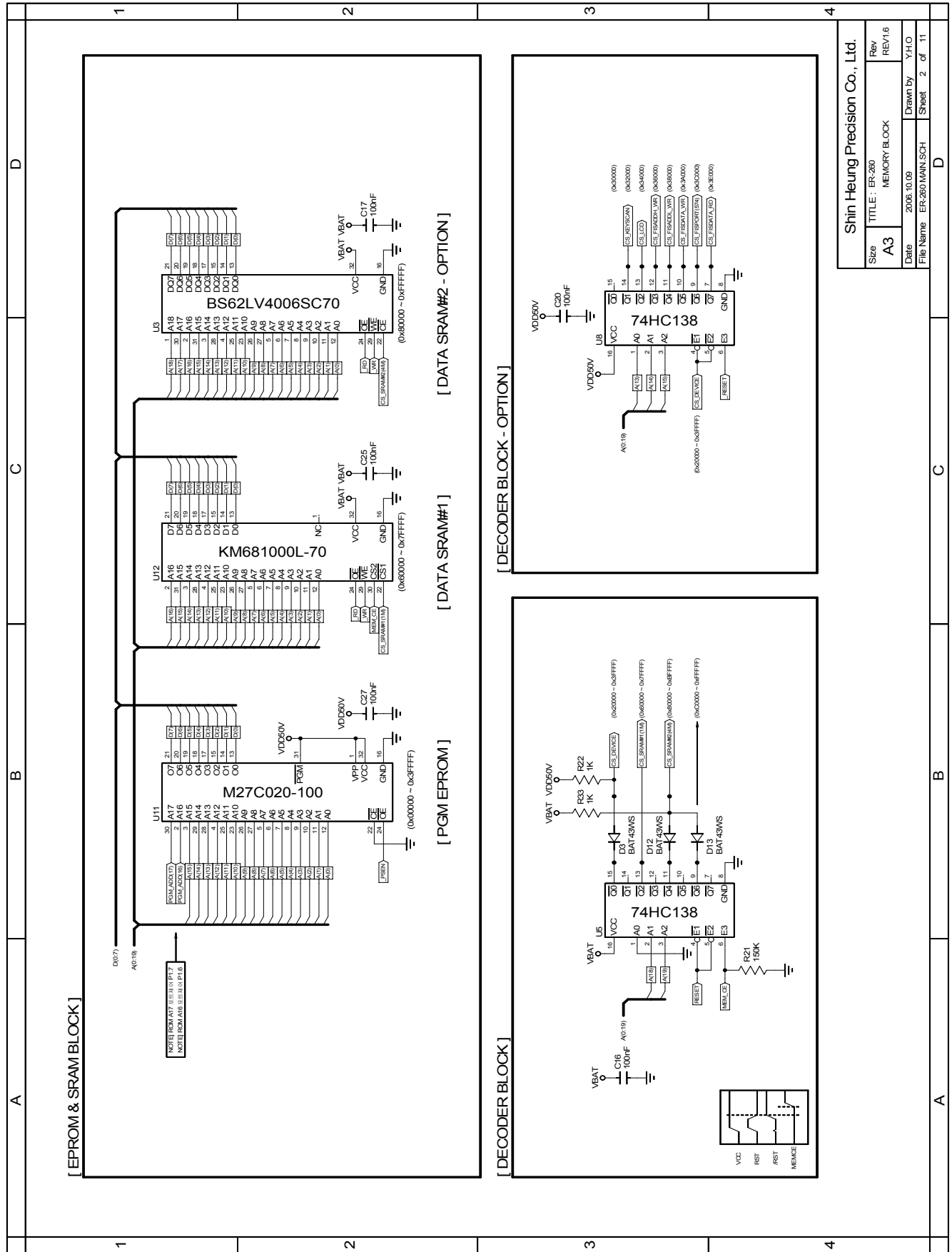
4. Joint PCB Schematics.

1) Joint (Receipt)	Page 10-15
2) Joint (Journal)	Page 10-16

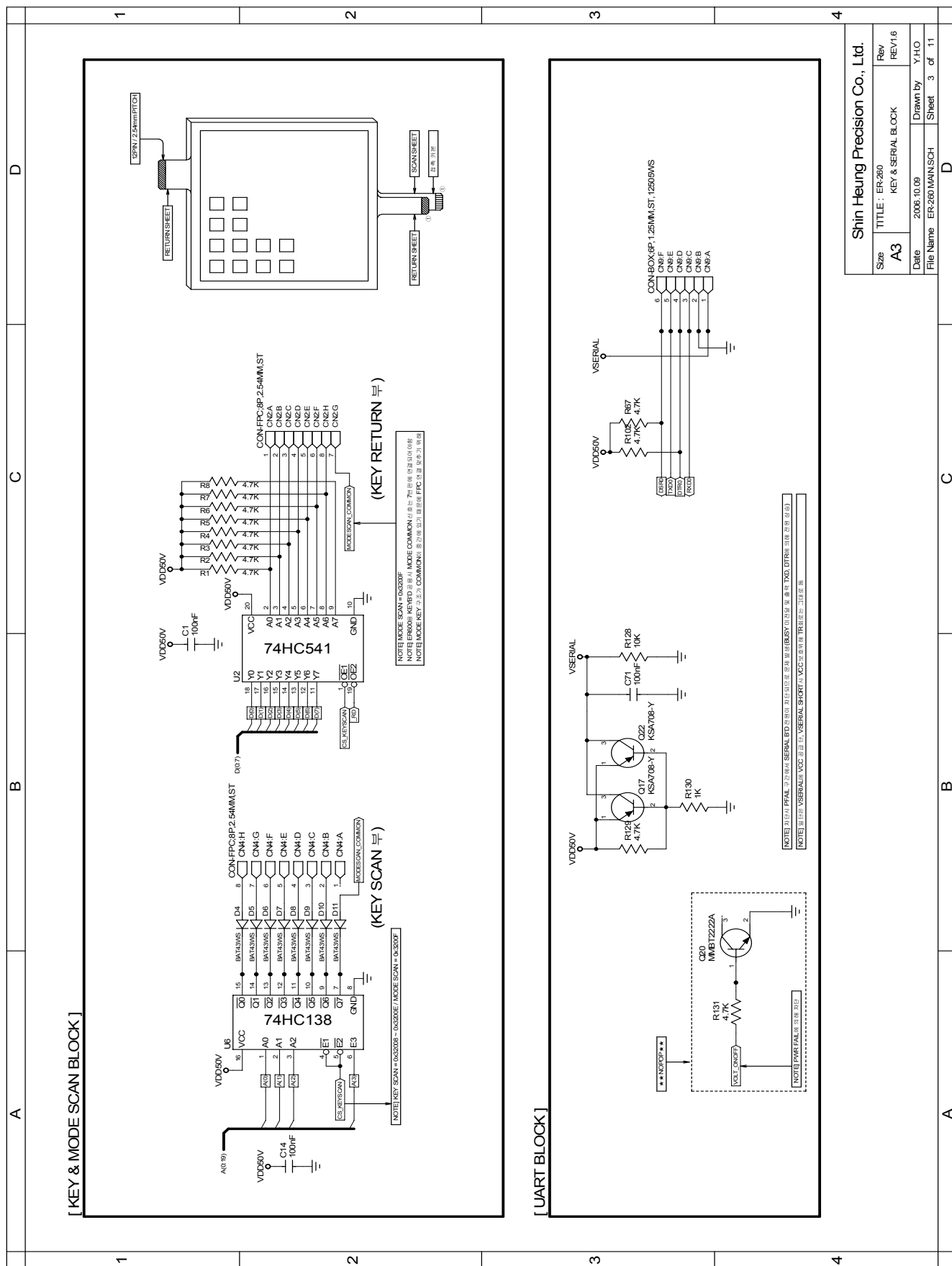
5. Fiscal PCB Schematics.

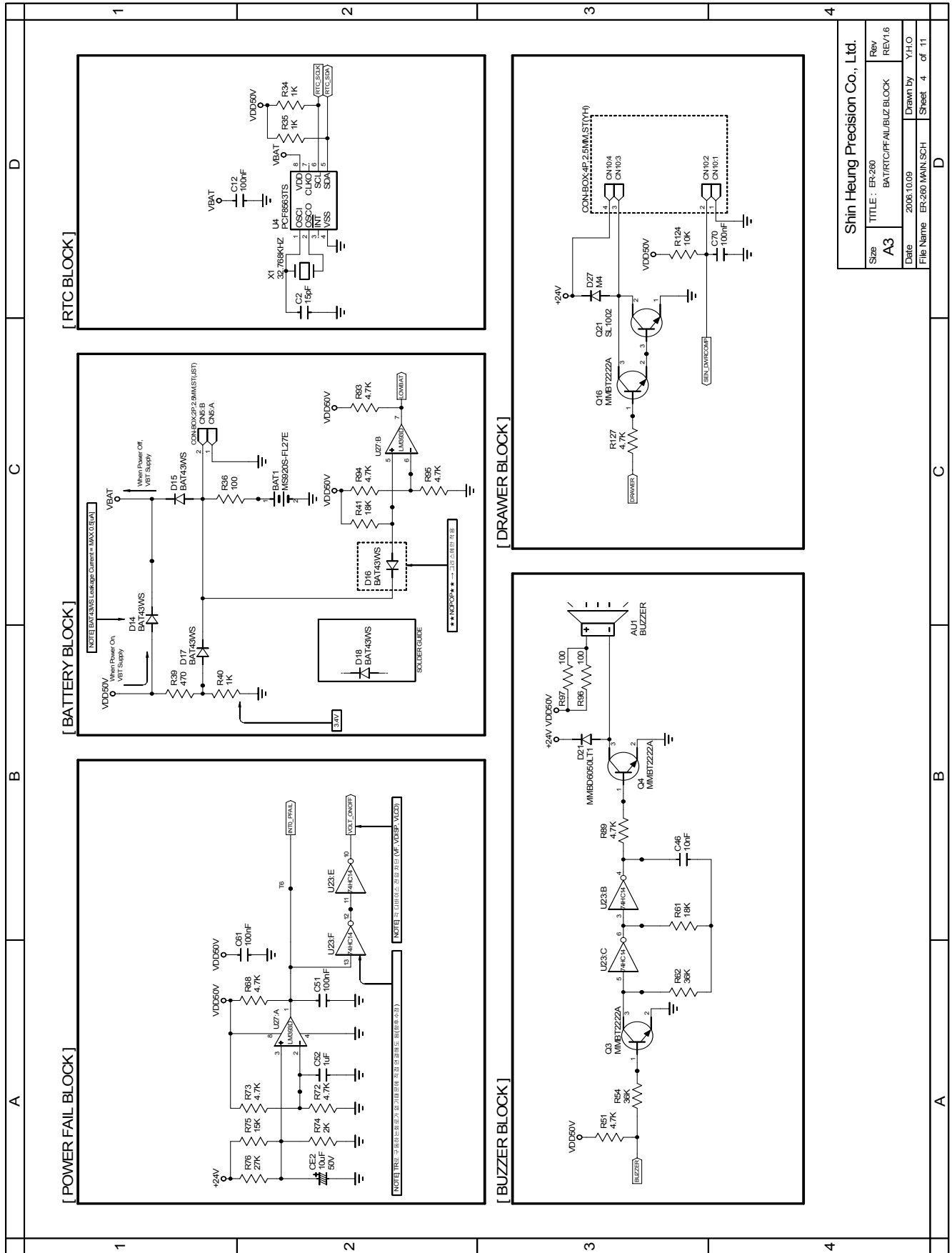
1) Fiscal (2M)	Page 10-17
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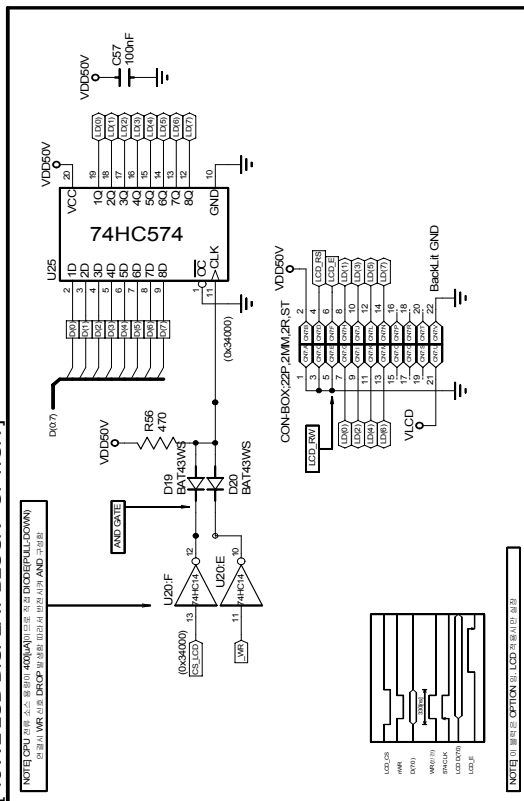
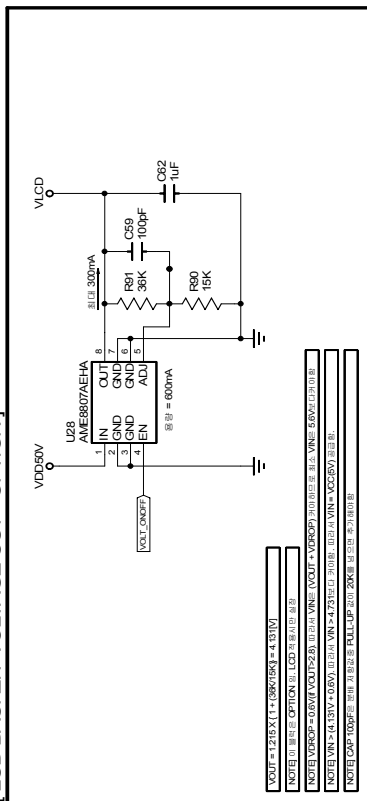
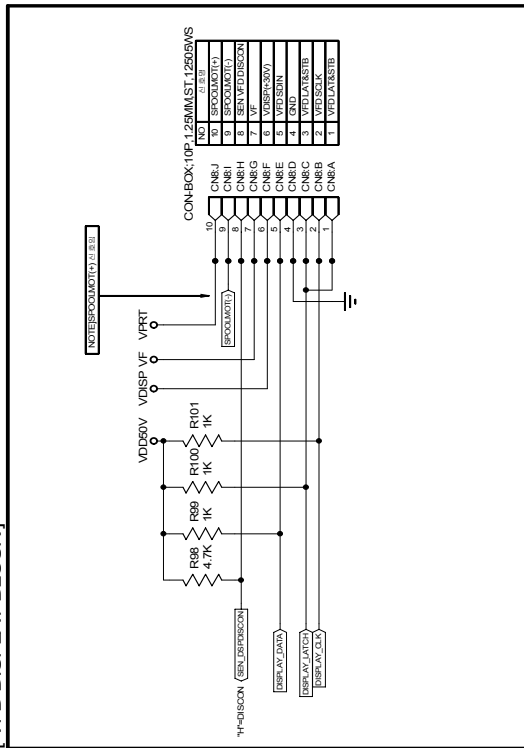


Shin Heung Precision Co., Ltd.			
Size	TITLE : ER-260	Rev	REV16
A3	MEMORY BLOCK		
Date	2006.10.09	Drawn by	Y.H.O
File Name	ER-260 MAIN SCH	Sheet	2 of 11

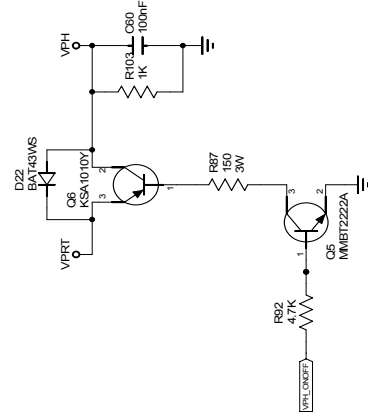




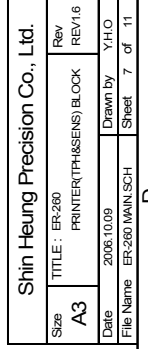
Shin Heung Precision Co., Ltd.			
Size	TITLE : ER-260	Rev	REV16
A3	BAT/RTC/FAIL/BUZ BLOCK		
Date	2006.10.09	Drawn by	Y.H.O
File Name	ER-260 MAIN SCH	Sheet	4 of 11

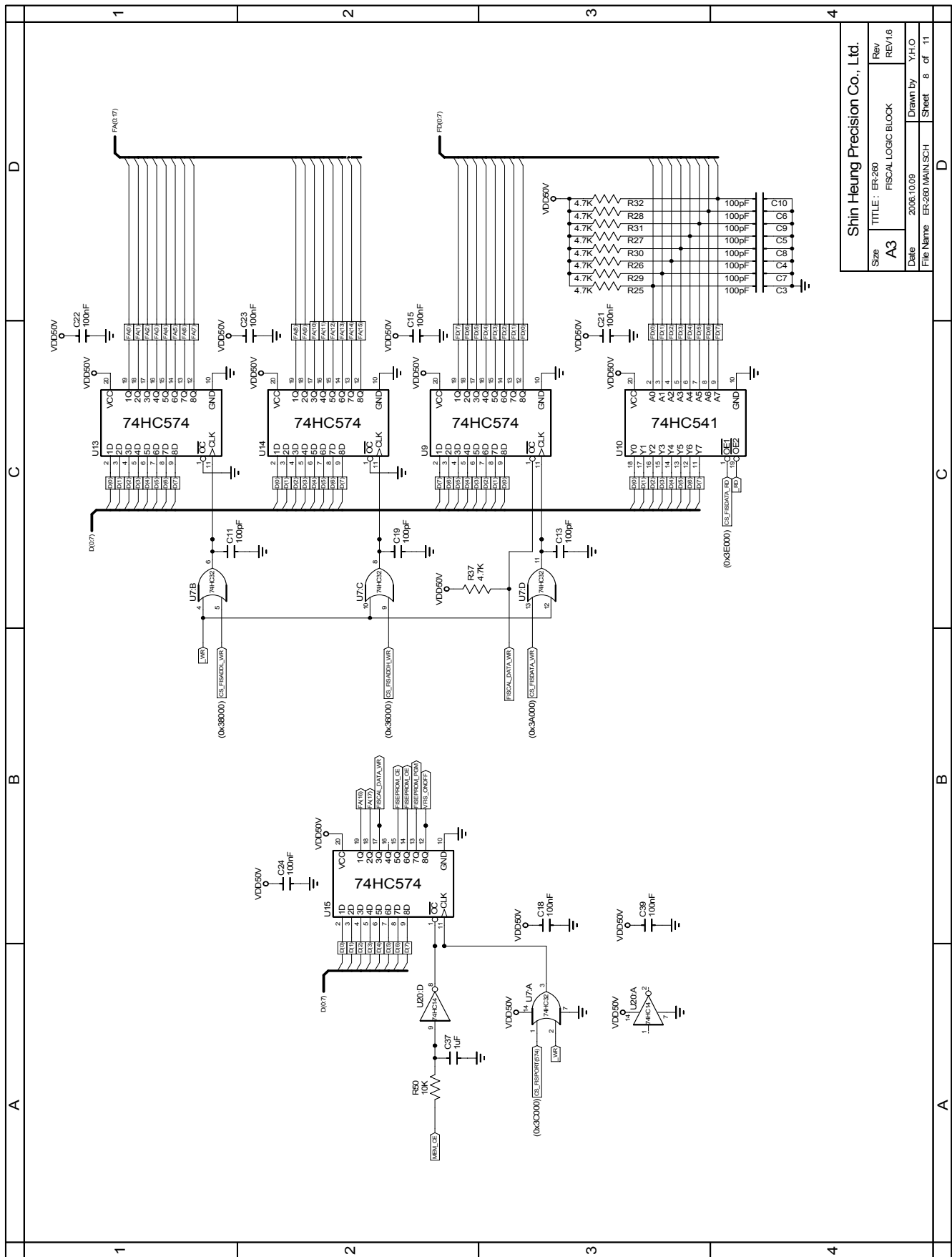


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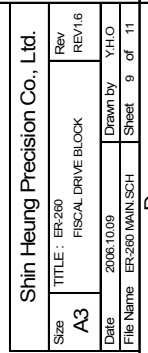


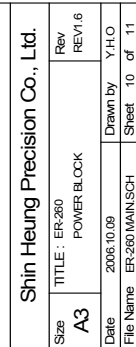
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Size A3	TITLE : ER-260 MOT DRIVER / SENSOR BLOCK	Rev REV1.6	
Date 2006.10.09	Drawn by Y.H.O		
File Name ER-260 MAIN SCH	Sheet 6	of 11	

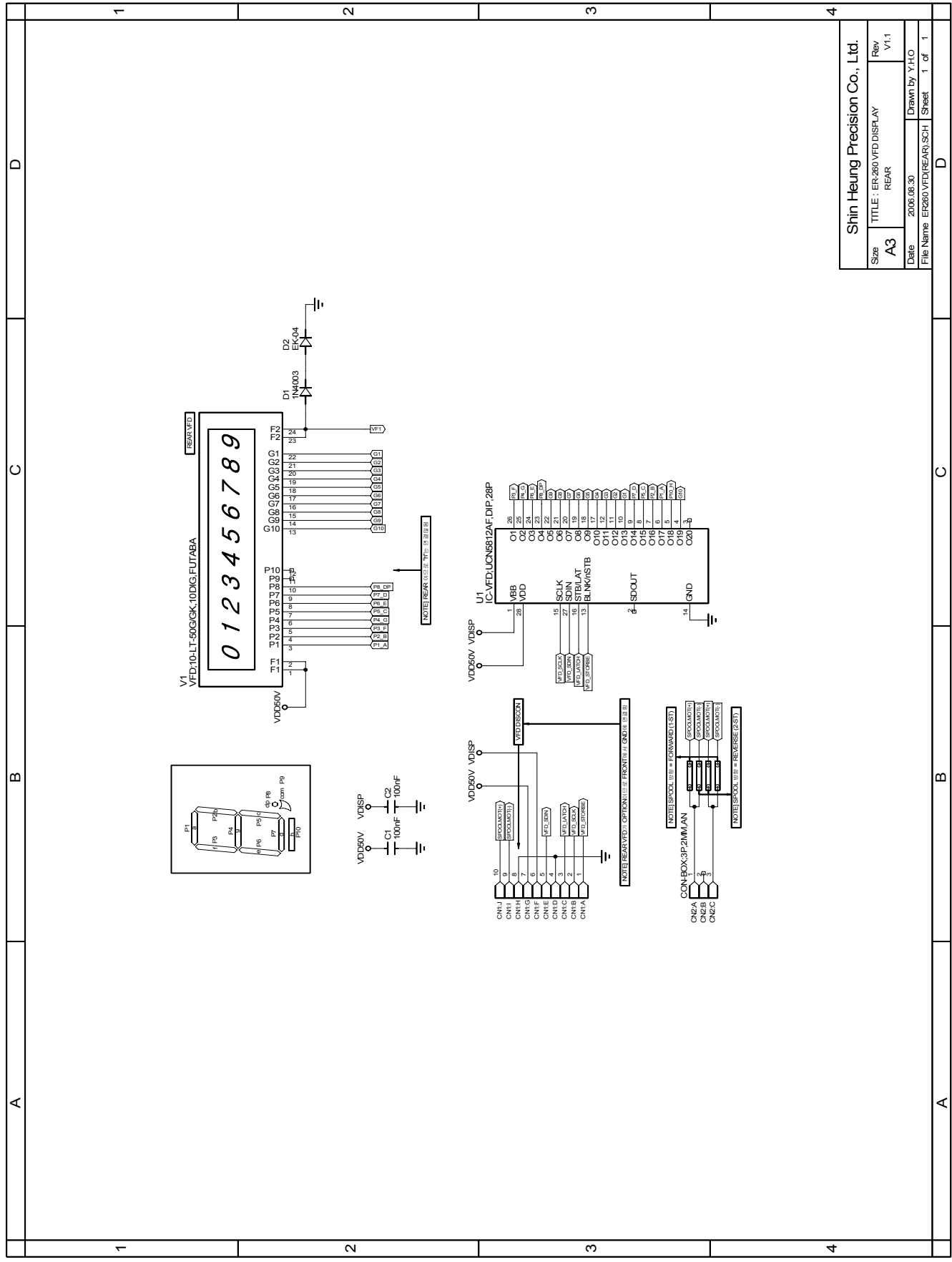




Shin Heung Precision Co., Ltd.			
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Date	2006.10.09	Sheet	8 of 11
File Name	ER-260 MAIN SCH		

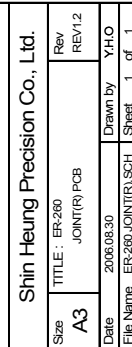


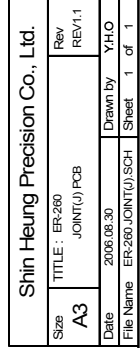


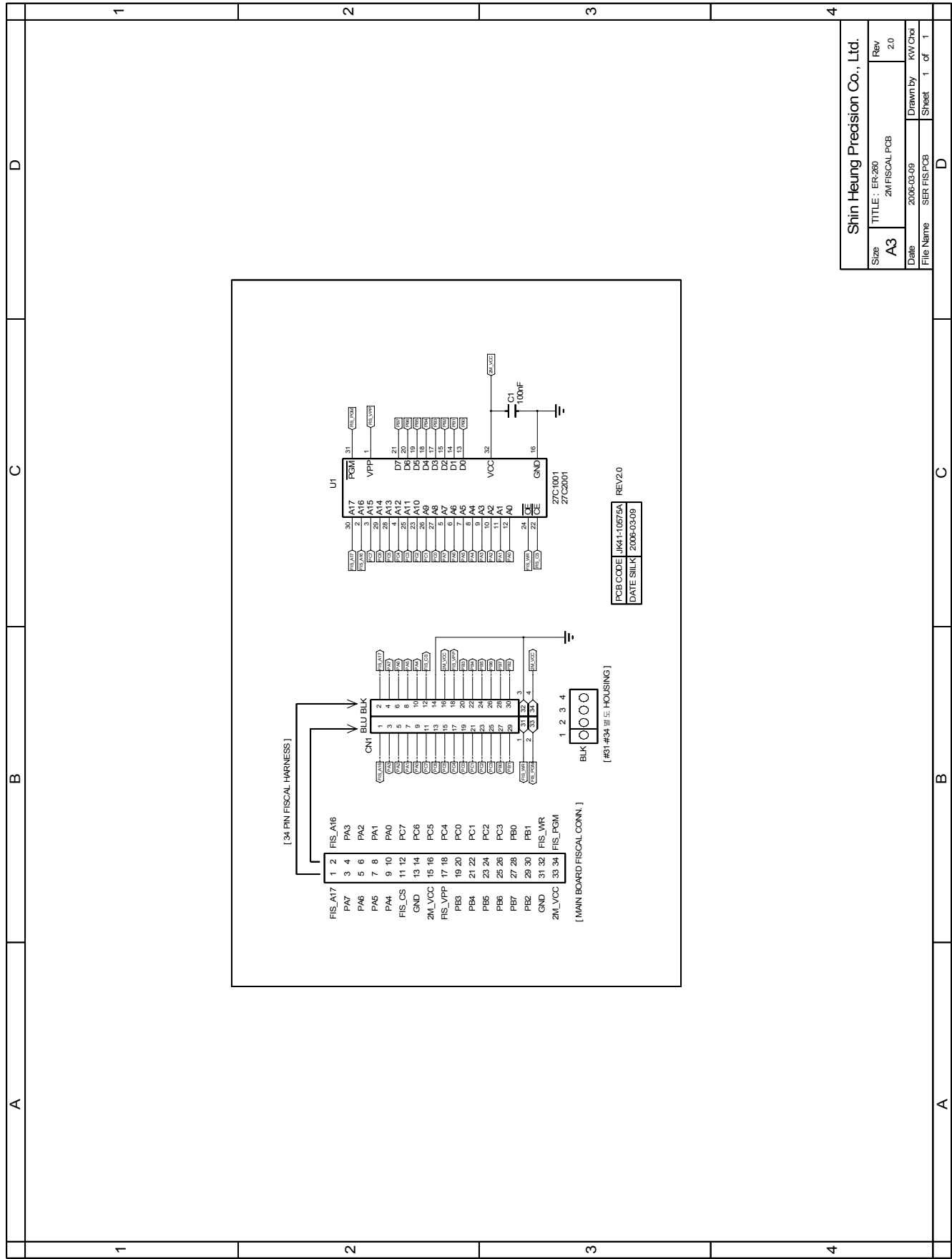


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Size	TITLE : ER-260 VFD DISPLAY	Rev	V1.1
A3	REAR	Drawn by	Y.H.O
Date	2006.08.30	Sheet	1 of 1
File Name	ER260 VFD(REF)SCH		









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